



SOUTH WORKS REDEVELOPMENT STUDY:

A VISION FOR SOUTH CHICAGO

COMPREHENSIVE PROJECT, Spring 2005

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CONTENTS

acknowledgments	4
abstract	5
introduction	7
process	13
site selection	13
case studies	14
inventory/analysis	22
mappings	32
opportunities and constraints	70
vision statement	70
assumptions	70
goals and objectives	70
program	73
conceptual design	73
schematic design	73
design proposal (framework)	90
implementation	90
conclusion	115
references	117

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ABSTRACT

This study brings together issues in contemporary landscape architecture as well as current social and environmental problems into a redevelopment study for a site in Chicago's southeast side. The design problem at issue is the redevelopment of the former United States Steel South Works facility in South Chicago. Permanently closed in 1992, the facility represents 112 years of industrial history in Chicago's southeast side.

Of the major movements in contemporary landscape architecture, three areas have been chosen as a focus in this design project. These areas include environmental reclamation/restoration, regenerative design and revelatory landscapes. The South Works site provides an excellent opportunity to incorporate these issues into its redevelopment given the rich industrial history and a chance at creating a more sustainable community model compared with the non-equitable resource use of the site's past.

Compounding the physical restrictions of the site are the social problems that have always been an issue in Chicago's southeast side. The continued expansion of industry in the area, along with its high rate of employment made it a friend of the community. However, as factory's started to close, jobs disappeared. The once abundant social cohesiveness went with these jobs while poverty and other social problems crept in.

Ultimately, this study attempts to create solutions to the social and environmental problems left by an industrial remnant while integrating three main areas of landscape architectural theory that will come together to create a design that will attempt to bring back hope for a bright and prosperous future to the people of South Chicago.



INTRODUCTION

It has never been our national goal to become native to this place. It has never seemed necessary even to begin such a journey. And now, almost too late, we perceive its necessity.

- Wes Jackson

PURPOSE OF STUDY

In general, "human culture, intended merely to be prosperous and healthy but have inadvertently triggered a mass extinction of other species, spread pollution throughout the world, and triggered climatic change – all of which undermines our prosperity and health" (Orr, 2002). In many ways the problems human culture has created go beyond the effects on the environment, stemming out into cultural issues of economics (power and greed,) religion and gender (social fragmentation,) common property, character (morality,) and technology among others (adapted from Orr, 2002). The largest symbols of these problems scatter across the American landscape, and in many cases are the remnants of a failure of the human race to accept and retain an ecological balance with its environment. These remnants are the industrial landscapes created by our greed and inability to manage our technology and intelligence. In many ways they stand as monuments to the failure of our design intentions.

Today these industrial remnants are considered brownfields. A Brownfield is classified by Dennison (1998) as an "abandoned, idled, or underused industrial and commercial property that has been taken out of productive use as a result of actual or perceived risks from environmental contamination." According to Russ (2000) "various researchers estimate that from 25,000 to 400,000 sites across the United States may be considered brownfields," while many more are added to these numbers every year. Also, "Redevelopers would be wise to invest in brownfields sites. For every \$1 spent, \$2.50 is returned, said Linda Garczynski, director of EPA's brownfields program" (Hazardous Waste Superfund Week, 2003). These sites provide enormous opportunities for human culture to intervene and correct deficiencies in our intentions. In Squeezing Green out of Brownfield Development, Leon (2003) gives some intriguing thoughts on why developers should look into brownfield redevelopment:

"So why should developers bother with brownfields? The answer is that in spite of the difficulties, many of these former industrial sites are in highly desirable urban infill areas and are far cheaper than comparable non-polluted properties. Also, brownfield development qualifies for subsidies, including tax increment financing (TIF), which allows for taxes on an assessed value of the property to be used for redevelopment activities, including infrastructure improvements. Plus, the cost of remediation has declined in the last 10 years as the technology has improved" (Leon, 2003).

Although brownfields present opportunities for remediation that will create area for new or infill development there is another great benefit from using these contaminated sites. The reusing of these brownfield sites also means that other greenfield sites will not be disturbed, at least on a project by project basis. Greenfields are undisturbed sites that are either existing natural spaces or agricultural land. The importance of not using these Greenfield sites is enormous considering the wholesale destruction of many of these types of properties in the last several decades due to urban sprawl. So, in effect, brownfield redevelopment helps curb urban sprawl and preserves open space in our rural and suburban areas.

In the past, brownfield redevelopment has been looked upon as a third rail in property development. Because of the large liability taken on by the owner and/or developer, redevelopment has been focused on the greenfields previously mentioned. However, congress has been making changes that remove, decrease or transfer liability to the rightful party. "One of the most significant steps Congress has taken to ameliorate the counterproductive liability effects of federal environmental laws is the enactment of EPA's policy of protection for lenders who were not actually involved in the management of a contaminated site" (Sattler, Li, Carlson, & Day, 2001). This is just one of the many things that have reduced liability. Prospective Purchaser Agreements, which allow the redeveloper to clean the site to a predetermined level while the EPA is not allowed to sue if clean-up is needed in the future, is another major liability control (Sattler et al., 2001).

The major regulatory work that resulted in many of these changes stems from the Comprehensive Environmental Response Compensation and Liability Act or CERCLA. CERCLA, or better known as Superfund has two main purposes.

"The first and foremost purpose is the imposition of liability on the following widely inclusive classes of parties, commonly known as 'Potentially Responsible Parties':

- Current owners and operators of the contaminated site or facility.
- Past owners and operators of the contaminated site or facility, who owned or operated at the time of disposal of hazardous substances.
- Transporters of hazardous substances to the site.
- Generators of the hazardous substances.

Superfund's secondary purpose is to authorize the government to collect a pool of money, or "Superfund," through taxation of the regulated industrial community" (Sattler et al., 2001).

Not only does Superfund and similar regulations try to clean up sites and pursue rightful liability but "(t)hese new regulatory frameworks and programs integrate the following concepts in an attempt to encourage revival and development of urban industrial areas: reduction of clean-up standards using reality-based risk assessments; limitations of liability for purchasers and lenders; creation of express clean-up standards; establishment of a more efficient and responsive government review process; and provision of government incentives to attract developers, entrepreneurs, commerce and industry back to blighted urban areas" (Sattler et al., 2001). The time, in fact is ripe with opportunities for brownfield redevelopment. "Through the new Brownfields Act, redevelopers can get the seed money they need to start work at a site. EPA awarded \$73.1 billion in brownfields assessment grants this year. The agency received 1,300 brownfields grant proposals while 214 were funded. EPA expects even more proposals next year" (Hazardous Waste Superfund Week, 2003).

The project that is set forth in this document is a design intervention that hopes to construct a bridge that links our industrial past to a brighter and more sustainable future. The site that I have chosen to make my intervention is the former location of the United States Steel South Works plant in Chicago, IL that closed its doors in 1992 and ended the reign of a piece of one of the world's leading steel manufacturers. The site is a size of 573 acres and is located in the neighborhood of South Chicago, approximately 10 miles south of downtown along the state border with Indiana. The site is bounded by Lake Michigan along its northern and eastern edges, the Calumet River to the south and the neighborhood of South Chicago on its western edge. The site extends from 79th street to between 91st and 92nd streets north to south and from Lake Michigan to various streets within the South Chicago neighborhood east to west.

The purpose of this project is to use this site to re-evaluate and re-state our design intentions, to use a systems approach to reclaim an industrial site (Brownfield) and restore it to an ecologically balanced landscape while incorporating principles of regenerative design that allows the site to continually heal itself and retain its physical and social productivity. While accomplishing this, the site will reveal its history and purpose to the user, educating people of its function, providing the city and the neighborhood of South Chicago with an asset rather than a liability.

SIGNIFICANCE OF STUDY

Due to the difficulty in the past of redeveloping industrial property, this study hopes to build upon previous successes in brownfield redevelopment while incorporating contemporary theory and new technologies in order for the project site to act as a model for sustainable development within the city of Chicago and the nation as a whole. This study is primed for success in many ways which include the community of South Chicago's commitment to developing the property, along with the city of Chicago; most importantly the mayor himself, Richard M. Daley, being whole heartedly committed to sustainable development within the city, particularly brownfield redevelopment.

Because of the success of previous projects like the Chicago Center for Green Technology,

one might think that the significance of a brownfield redevelopment within the city is subdued since projects have already been successfully completed. Contrary to this belief is the fact that a large scale brownfield project in an extremely overlooked and underserved community has never been completed or attempted in the city to this point. However, this does not mean the feat is impossible. To succeed in redeveloping a large brownfield site in an underserved community will require the help and expertise of numerous agencies and individuals.

South Chicago is like other communities south of the city that currently suffers from poverty, job displacement, lack of amenities such as parks and open space, along with environmental problems such as air and water pollution stemming from the areas industrial nature. But, unlike other southern communities, South Chicago is fortunate to be located on Lake Michigan. Although lake access is possible, the occupation of the South Works site for the past 125 years has prevented the community from accessing this amenity. Lake access, however, was never a concern while South Works was in operation. The thousands of jobs sustained by the facility were far more important to the immigrant community than the lake access they could have had. However, South Chicago remains as the only Chicago metropolitan community with lake access possibilities not to have access to the lake.

Interest in reclaiming the former steel facility is changing the political atmosphere in South Chicago. Since the facility closed in 1992, interest groups and community members have been working to redevelop the site in order to fulfill the needs of the community and the region. The Southeast Chicago Redevelopment Commission, headed by Lynn Cunningham, has been an integral part in bringing the community, the city and developers to the table to discuss redevelopment opportunities. While "some communities prefer the replacement of industrial manufacturing facilities with commercial facilities, residential buildings or neighborhood parks and recreational spaces, which they perceive as less dangerous to the public health and as less harmful to the environment," (Sattler et al., 2001) South Chicago is in great need to replace jobs that were lost when the facility closed at the same time creating new better paying jobs to amend the 30% of community members that are currently under the poverty line. The community is willing to give up open space for jobs, yet would like to have both in order to foster a sustainable community into the future.

Therefore, redeveloping the South Works site not only represents opportunities for a city and regional model for brownfield redevelopment in an underserved community, but presents the community with new opportunities to increase its standing in the city and the region with creation of new amenities and jobs for its citizens. Due to the social and environmental factors involved, a great significance is placed on the redevelopment of this site. Because of the diverse nature of the current conditions along with the vision for the redevelopment of the site, a landscape architect is a perfect example of the type of person needed to oversee the redevelopment of this project.

As is the case in many large scale projects of this nature, landscape architects are usually not brought onto the project until much later in the design process. Urban planners and architects are usually the first groups brought in on a number and variety of projects, with landscape architects brought in to fill in the voids created by those before them. However, urban planning was part of the profession of landscape architecture before it developed into its own distinct branch of practice and one might say that landscape architecture is the profession that brings landscape and architecture together and is fully competent in commanding a collaborative effort between all disciplines. If this is the case, there is no reason for landscape architects to be brought in at the end of the visioning process, in fact, it is more important that landscape architects be present at the beginning of the planning process in order to keep the process moving and to insure proper direction that does not create holes to be filled in the end that might lead to compromising the project's success.

With this in mind, I will approach this project from the standpoint that I am the lead in the redevelopment of this project, where it is my responsibility to bring in the appropriate personnel in order to successfully complete the project and its requirements. As the lead in the development of this project it is important that I stress collaboration in the design process. Due to the short time frame for the development of this project, information relating to the prospective owners and developers, the community and site context along with any other relevant information to speed the process along will be taken from existing documents and interviews made by myself. The help of certified professionals in the fields of law, remediation and design will bring a much needed, and necessary component of the development process to the fore. Through all these efforts I hope to cement the significance of the landscape architect as a competent and necessary component and leader of a brownfield redevelopment project.

SCOPE OF STUDY

The redevelopment of the South Works site requires the comprehension and the ability to manipulate and organize diverse and complicated information. This project not only entails the design of a piece of land, but the remediation of a scared landscape, two utterly separate components. In turn, the study will be divided into two separate themes. The first theme is the history of the landscape and its environmental make-up that will be used to

reclaim the land for redevelopment. The second is the design, planning and development of the site post-remediation for current and future needs.

Although the South Works facility has gained the approval and certification of the EPA for the redevelopment of the site, obstacles remain to its reclamation. The site is composed most entirely of landfill created from construction debris and slag from the steel production process. Not only did this site produce a much needed resource in terms of raw steel, it also managed to produce the land needed throughout the development and expansion of the facility through the slag waste product itself. Due to the lack of proper soil needed for the development of park and recreation space requested by the community, further remediation is necessary and innovative responses to this problem are a key component of this study.

The design of the site post-remediation is the second phase in this study. The challenge will be to combine the needs of the community, developer and the environment itself into an aesthetically pleasing, productive and sustainable project. Of the major requirements in the design phase are the future needs for mixed housing types, business development, including new industrial areas and open space for both passive and intensive recreation.

What must also be understood is that although the two phases are considered separate for the purpose of this study, they are interconnected in their potential to make this study successful. Forms and functions of the remediation process can and should be reused in the design phase. What this will result in is the site as palimpsest which is relevant for the use of environmental interpretation, educating the user of the history and processes of the site.

In keeping with my own interests and the needs of the redevelopment process for the site, this study will focus also on three distinct project types. Environmental reclamation and restoration has been previously mentioned and will be the major component of this study. The second is regenerative design or design for sustainability which entails the development and maintenance of the site that fulfills the communities current needs without putting the needs of future generations at risk. The final type is revelatory landscapes, which entails the development of the site in a way that produces forms, spaces and other features that educate the visitor about its history and processes.

STUDY OBJECTIVES

As the final project of my undergraduate career, this study is meant to combine the knowledge and skills I have learned during the preceding 5 years. This study combines my interests in several project typologies and it is my hope that my knowledge in all of these areas will be expanded and put on display with the completion of this project.

The future of the South Chicago community has become extremely important to me after the great deal of time spent in research, study and design for this project. The major objective of this study is to add to the ideas and plans already created for the future of the South Works site and to increase the dialogue needed to create the best project for the community and its future. In accordance with this, the completed version of this project will be made available to the South Chicago community through Lynne Cunningham of the Southeast Chicago Development Commission. Throughout the process of this study information will be available to everyone interested in its success through a companion website based within my personal internet site.

The relevant URL can be found at the following address: <http://www.bsu.edu/web/plpeterson/PatrickLPetersonOnline/Content/Home/Works/SouthWorks/Main.htm>

With the help of this project, along with the great amount of work done by so many other agencies and individuals, the community of South Chicago will have a legacy that speaks of its great industrial history, its subsequent decline, and the rebirth of a rich and diverse community that will act as a model for similar redevelopment projects.



PROCESS

The ability to be good is not the ability to do nothing. It is not negative or passive. It is the ability to do something well – to do good work for good reasons. In order to be good you have to know how – and this knowing is vast, complex, humble and humbling; it is of the mind and of the hands, of neither alone.

- Wendell Berry

This section documents the analytical and design processes used throughout the completion of this comprehensive project. From site selection through implementation, the following material will allow the reader to enter the mind of the designer to uncover the history of one of the nations most intriguing industrial sites, its eventual downfall and its planned rejuvenation by the mind and hands of the designer. With the help of many experts with direct interests in the rejuvenation of the surrounding community and the site itself along with experts in the fields of site reclamation and sustainable design, this project intends to be a model for industrial development that not only rejuvenates itself but creates lasting positive impacts for the surrounding community.

SITE SELECTION

The project site selection was rather simple given the detailed characteristics I was looking for. The main criteria were to be able to work on a project within the Chicago Metropolitan Region, and if possible, locate the largest brownfield site available. After narrowing the search, sites were selected that met the second stage of criteria. The most notable characteristics were proximity to public water ways and the potential for the site to fill a major roll in rejuvenating its host community. The following is a list of the criteria used in this process:

- chicago, illinois project location
- industrial brownfield site
- largest continual site available
- low income neighborhood
- project site in extreme need of rehabilitation
- proximity to natural or man-made water course/body
- context that is in need of rejuvenation in terms of open space, residential, commercial and industrial amenities

Site selection criteria were used within the United States EPA and the Illinois EPA websites to locate a suitable project location. After searching both websites, a handful of sites remained using the above criteria. Additional research into the history and current make-up of the site and surrounding community revealed one clear candidate. The United States Steel South Works site was chosen for its rich history and its ability to offer a challenging design problem. The only criterion that was not matched to the extent intended was the wish for a site in “extreme” need of rehabilitation.

Although the South Works site provides a great opportunity to rejuvenate itself and the surrounding community, environmentally it is not a nuisance. The Illinois EPA has worked with US Steel to amend any negative impacts to groundwater or soil contamination. However, the site, its soil and existing structures present enormous challenges to the designer, of which I will discuss later in this document.

CASE STUDIES

The following case study discussions are meant to inform the goals and objectives of the South Works study which will also be drawn from the existing opportunities and constraints and ultimately lead to a program for this study. The discussion is organized by a brief overview of the project, how each project relates to the South Works study and how the South Works study could use similar approaches and strategies.

Crissy Field: San Francisco, CA.

Client: Golden Gate National Parks Conservancy and the National Park Service
Landscape Architect: Hargreaves Associates
Area: 100 acres

Crissy Field is an excellent example of a project necessitating the restoration of both cultural and environmental components of the landscape. Hargreaves Associates were not only asked to restore a section of the long departed tidal marsh areas, but were also required to include a park in the design that somehow restored the historic military airfield for this future national park site.

The main challenges in the design of this project had to do with the tidal marsh area and how to make it function properly to allow visitors to understand its purpose through interpretation and site tours by national park staff as well as passive observation during events and through the general use of the park. The other challenge of somehow representing the historic airfield was to represent its original size and shape as a landform that intersected with the tidal marsh area which ends up providing a promontory in which to view the marsh area and serves as a visual anchor in the landscape.

Both of these solutions for the original requests by the national park service for the design of this park help to inform what the options are for the South Works project. Use of a restored natural area and the representation of a historic element through landform provide for the inclusion of revelatory and reclamation/restoration aspects in the final design. Perhaps the South Works redevelopment could include a restored lakefront area that also combines site features that help represent the industrial heritage of the site.

Gasworks Park: Seattle, WA.

Client: City of Seattle, WA., Parks and Recreation
Landscape Architect: Richard Haag Associates, Inc.
Area: 20.50 acres

Historically, the gas works that predated the existing park processed coal to produce gas and was later converted to process crude oil. The remnants that were leftover after the facility closed in the 1950's is what is worth discussion.

Richard Haag Associates were hired by the Seattle Department of Parks and Recreation to design a park on the gas works site. The firm was charged not with only designing the park, but to also determine a remediation process to cleanse the soil that was contaminated by the years of gas, coal and oil percolating into the soil. According to Haag, the process suggested and subsequently implemented was to let nature do the dirty work, allowing microbes to feast on the remaining contaminants. After removing the top layer of existing soil, sewage sludge was placed over the site; the goal being to provide the microbes with nutrients in the form of sludge which would then activate them to cleanse the soil of the contaminants. After being devoid of vegetation for 14 years, and after just two years of spreading the sludge, tomato plants imbedded in the sludge started growing.

Today the site is covered mostly by lawn and in the recent past oil has seeped to the surface and subsequently cleaned. There is still much debate if the microbes actually ever did any real work, the EPA suggesting that the ground is still contaminated and needs further remediation. Haag counters their argument with neither side agreeing on what to do.

Fortunately, the South Works site has been deemed healthy by the Illinois EPA with the soil composed of construction debris and slag from the steel making process and lacking and contamination or adverse effects on ground or lake water. However, solutions are necessary to stabilize the fill after the site is re-graded along with possible solutions such as the sifting of excess fill for use in building materials and so forth. The main problem however, is the establishment of a soil layer on the site. Previous studies on the site itself included options such as barging in lake or river sediment to cover the site in 3' of soil, or to use biosolids or a similar mixture of soil and biosolids which could be another more cost effective alternative than just dredged material. Whatever is done it must provide a minimum of 3' of healthy soil to support tree growth. The question is what would be the most cost effective solution.



1. *CRISSEY FIELD*
Pedestrian paths and salt marsh restoration area.
(Photo by Hargreaves Associates)



2. *CRISSEY FIELD*
Aerial view of the salt marsh restoration and the ephemeral mounding representing the historic landing strip on the right.
(Photo by Hargreaves Associates)



3. *GASWORKS PARK*
Historic industrial structures, park space and view towards downtown seattle.
(Photo by Richard Haag Associates)



4. *GASWORKS PARK*
Historic structures as Richard Haag deemed "sacred to the site."
(Photo by Richard Haag Associates)

Harbor Point: Boston, MA

Client: Corcoran, Mullins, Jennison
Architect: Goody & Clancy
Area: 51 acres

The story of Harbor Point is a most fascinating tale. The current site was initially named Columbia Point, a product of the 1950's investment in public housing for working class citizens that had fallen on hard times. When in the 1970's Columbia Point had reached its lowest point of infestation of guns, violence and crime, it became time to try something else in this racially mixed community.

What rose out of the redevelopment of Columbia Point, with help from its native citizens was a new development called Harbor Point, which showcased mixed housing types with a variety of scale. Harbor Point is much different than its predecessor of drab high rise apartments with poor quality open space which fostered crime and violence. Harbor Point shows an investment in quality design and open space, where buildings have character and parks are full of quality recreation amenities.

Harbor Point is not only a success because of the investment in the community itself, but also in the development that surrounds it. The community is surrounded by several other institutions that help anchor the quality of life and environment on the point.

This project shows the importance of not only the level of detail on the site itself, but also the importance of the web of institutions that surround it. The South Works project is envisioned as a mix of residential, industrial, commercial and open space. This variety of amenities will help solidify South Works as a viable community just like that of Harbor Point and its neighbors.

Parque Fundidora: Monterrey, Nuevo Leon, Mexico

Client: State of Nuevo Leon, Mexico
Landscape Architect: Unknown
Area: 281.694 acres

The majority of Mexican cities lack quality open space; except for a handful of colonial plazas and courts, most town centers are devoid of any open space that includes recreation areas for intensive activities such as sports or large public gatherings. Monterrey is a major exception. The Parque Fundidora, just to the east of the industrial capital's downtown is a large public open space amenity.

Anchored by an internationally renowned formula one race track that connects most areas of the park, the park has excellent circulation and a variety of amenities. When not used as a race track, the road network accommodates runners, roller-bladers, walkers and joggers. Large areas of lawn and tree covered areas provide numerous opportunities for passive as well as intensive recreation. The site includes such major attractions as a children's theme park, baseball stadium, convention center, auditorium, along with the reuse of existing buildings as educational facilities and art centers.

Parque Fundidora, like Gas Works Park shows us that the reuse of existing structures and material from the sites past can give organization and character to the site as well as inform the visitor of the site's history. With its diversity of site amenities and creative reuse of materials, Parque Fundidora provides this South Works study with a vision for the numerous possibilities for land use on the South Chicago site. The opportunity not only exists to create new residential and industrial areas, but to also create a dynamic web of activities and amenities that can mix with restored natural areas that could create a diverse and active community, while providing much needed open space for a deprived area.

River Place: Portland, OR.

Client: Portland Development Commission, Cornerstone Columbia
Development and Trammell Crow
Architect: Bumgardner Architects and GGLO Architects
Area: 52 acres

The city of Portland is centered over the Willamette River, yet its downtown is separated from this geographic feature by an interstate, cutting off access to the areas major natural feature. However, in the past several years the city has spearheaded an effort to link the downtown with the river. This goal has produced new plans for the city's riverfront, with the River Place development being a key feature.

This new development brings together residential, commercial, office space and open space into the beautiful riverfront area. This development is unique for several reasons. The area was a former industrial area that was sighted along the river for the easy access to water. However, as industry left the area, derelict brownfields started to dot the shorelines. With River Place, the city of Portland gains a unique new aspect to the riverfront that



5. **HARBOR POINT**
Aerial view of the development with its focus on establishing the waterfront as a positive space for the community.
 (Photo by Goody & Clancy)



6. **PARQUE FUNDIDORA**
Historic industrial structures set in a new open space system.
 (Photo by Patrick L. Peterson)



7. **RIVER PLACE**
Mixed-use development with commercial below and residential units above. Parking is located behind buildings.
 (Photo by Terrain.org)



8. **RIVER PLACE**
Mixed-use development with commercial below and office space above. Wide pedestrian areas and planting areas abound.
 (Photo by Terrain.org)

has emphasized the city's wishes in the form of the implementation of more sustainable practices.

Some of the more interesting aspects of River Place have to do with its commitment to keeping the automobile hidden. In most cases parking areas are either underground or behind office and residential buildings in order to preserve the streets for the people. The area is extremely walk-able and promotes pedestrian activity with residential and commercial areas near each other, in many cases with these uses stacked on top of each other. This organization not only is more convenient, it also promotes a healthier life-style for its residents.

River Place is similar to Harbor Point in several aspects. Both are located along a waterfront, just like the South Works property, both include multiple residential choices for market based and low income households and they both have a diversity of building types that contribute to the diversity of the community.

All of these features are important elements in the redevelopment of the South Works site as well. It will be extremely important to offer multiple choices in the residential development that should also see the inclusion of mixed use areas to promote a viable community. Streets should also be kept for the public to freely roam the community without being congested with over abundant automobiles. All of these factors will contribute to a rich and vibrant community that will foster a socially sustainable lifestyle. However, the inclusion of greater levels of environmentally sustainable practices and strategies should also be an important aspect to the development that will create this community as something revolutionary and unique for its time and place.

Downsview Park: Toronto, Canada

Client: Parc Downsview Park Inc., Government of Canada
Designer/Architect: Bruce Mau Design Inc. and the Office for Metropolitan Architecture
Area: 320 acres

The most intriguing aspect of the Downsview Park Competition was the submission and subsequent winning entry by OMA and Bruce Mau. The concept in this entry was unique for its emphasis on graphic representation and its lack of specific details in what it was suggesting.

Although similar to some of the other top entries in terms of a lack of commitment by the designers to specifically locate functions, activities and spaces on the plan, the OMA/Mau submission was extreme in only suggesting a variety of uses and activities as well as infrastructure without churning out an exact plan. A large part of the submission was to tell the jury what the park could be in terms of culture and environment and give the activities a relative timeline for implementation. These activities and spaces were described by their make-up and size but were not specifically delineated on the plan. Instead, the final "plan" shows a matrix of different sized circles representing the different uses and their relative size being connected by a web of paths that foster unlimited connections.

This submission has many contributions for the South Works redevelopment which include the generic phasing of site features along with their relative size and interconnections. Although the final Redevelopment study is envisioned as being more detailed than the OMA/Mau submission, the organization and playful use of graphics to represent the connections suggested could prove extremely useful in programming such a large site.

Fresh Kills Park (formerly Fresh Kills Landfill): Staten Island, N.Y.

Client: City of New York, New York
Landscape Architect: Field Operations
Area: 2,200 acres

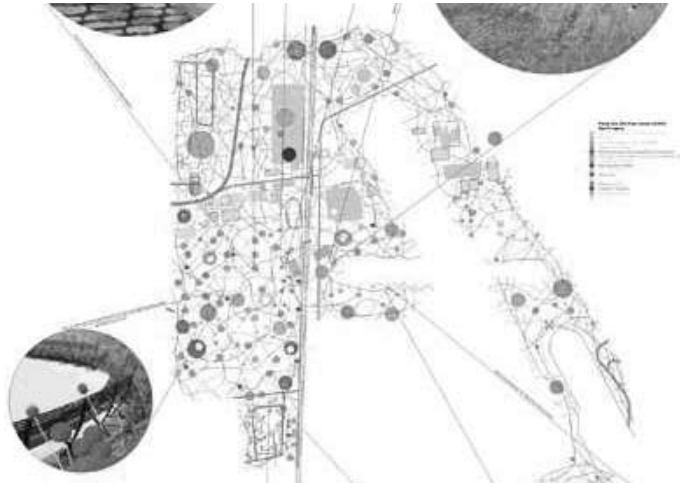
The plan for Fresh Kills landfill was a result of another competition winning entry submitted by the firm Field Operations. The submission is particularly relevant here in its detailed programming of site features and functions along with the phasing of these elements into an appropriate and well researched manner.

The plans in this submission are particularly relevant. Given the nature of the project and the need for a large amount of citizen involvement, the Fresh Kills plans simplify uses in its variety of maps and phasing diagrams. Layer mappings like the use and separation of "threads, islands and mats" give the viewer a unique perspective on the proposal that appears to be clear and relevant. The phasing diagrams also include numerous mappings that show specific locations of elements arranged and implemented over time. This seems to help both the designer and the viewer of these graphics better organize the complex set of features of the site.

Although Fresh Kills is almost four times larger than the South Works site, the process and



9. **DOWNSVIEW PARK**
Competition entry showing visioning and the relative lack of detail in the team's project proposal.
(Images by Bruce Mau Design and the Office for Metropolitan Architecture)



10. **DOWNSVIEW PARK**
Competition entry showing visioning and the relative lack of detail in the team's project proposal.
(Images by Bruce Mau Design and the Office for Metropolitan Architecture)



11. **FRESH KILLS PARK**
Image produced as apart of the visioning process for the design proposal.
(Image by Field Operations)



12. **FRESH KILLS PARK**
Image produced as apart of the visioning process for the design proposal.
(Image by Field Operations)

graphic representation used in the Fresh Kills submission will prove extremely useful. Not only will this approach help organize the program elements, but it will also help the viewer organize the complex web elements that the design will be composed of.

Sydney Olympic Park: Sydney, Australia

Client: Sydney Olympic Committee
Landscape Architect: Hargreaves Associates
Area: 5 acres

Similar to the Crissy Field project already discussed, the Sydney Olympic Park features, also designed by Hargreaves Associates, include particular attention to natural ecologies. This project is known for the representation of the water cycle, particularly in the water feature at the terminus of the Olympic Plaza.

The long and wide Olympic Plaza, also designed by Hargreaves, collects storm water which feeds the thirst of the tree plantings along its expanse and distributes the rest to the constructed wetland at the terminus. This wetland is interesting for several reasons. Not only is it useful in cleansing the storm water before it is released into a sensitive natural waterway, but the playful fountains and landforms add a sense of whimsy to this major Olympic attraction. Interaction with its fountains and landforms involve the visitor as well as creates a sense of character for the whole park.

There is a need and a desire for a grand public space on the South Works site to act as a southern terminus to the extensive Chicago lakefront, but also to celebrate the south side neighborhoods access to the lake after not having any over so many years. The South Works project is envisioned as having a clear sustainable and "green" theme to it and the addition of a water feature with an artful display will add to the importance and sense of character to this space as well as add to the general sustainable theme.

Silresim Superfund Site Redevelopment Study: Lowell, MA.

Client: City of Lowell, Massachusetts, Division of Planning and Development
Landscape Architect: Stoss Landscape Urbanism, Boston, M.A.
Area: 120 acres

Perhaps the most relevant project for this study is the Silresim Superfund Redevelopment Study produced by Stoss Landscape Urbanism. This study focused on different redevelopment scenarios for a superfund site in Lowell, Massachusetts. It is important in that it shares several key aspects with the South Works site. Both sites are brownfields that have access to a public water body and emphasize "green" materials, technologies and other strategies.

Another important aspect of this study is the visioning used to project a character of the future redevelopment. Specific suggestions were made and imagery was produced to show what these elements would look like. These images were further supported by phasing diagrams which showed the projected development of the site. Further mappings showed the external connections of the site, properly placing it within the region.

Similar needs for these types of imagery and mappings are needed in the South Works study. Since time will not allow for detailing for specific elements in plan, what will need to be done is to organize these elements as close to scale and location within the site as possible. Complementing imagery and plans where applicable should also be used to create a vision for this important site.



13.

SYDNEY OLYMPIC PARK

*Olympic plaza with porous paving which funnels water to a trench system leading to a constructed wetland.
(Photo by Hargreaves Associates)*



14.

SYDNEY OLYMPIC PARK

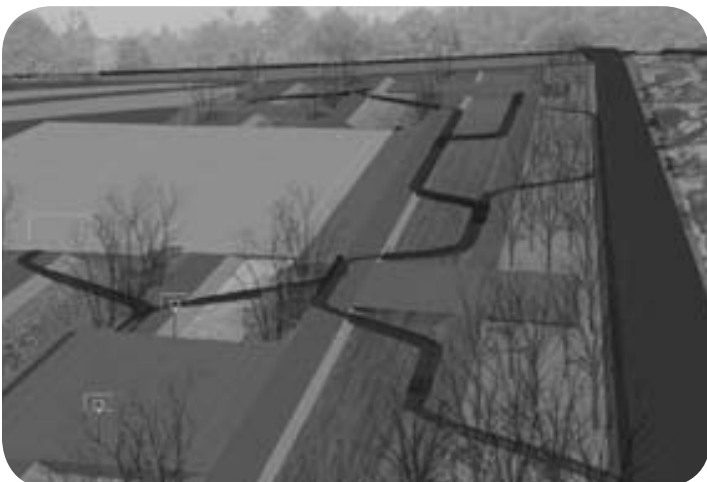
*Sculptural wetland feature that filters surface water before releasing it into the natural watershed.
(Photo by Hargreaves Associates)*



15.

SILRESIM SUPERFUND SITE

*View of wetland terraces and trail system.
(Image by Stoss Landscape Urbanism)*



16.

SILRESIM SUPERFUND SITE

*Aerial view of Wetland terraces, trails and sports fields.
(Image by Stoss Landscape Urbanism)*

INVENTORY/ANALYSIS

The present state of the US South Works facility is just one of many factors that will influence the redevelopment study set forth in this document. It is important to discuss the site and its local and regional context to better understand both the importance the site has played in the past as well as what the site represents for the future of South Chicago and the greater region.

natural and cultural history of the region

The geological character of the region and its history is rich in that a variety of surface conditions have existed that have shaped the current landscape. As the last glaciers retreated from this area that saw them provide the central states with fertile soils, they also created a large lake. The original lake after glacier retreat was called Lake Chicago which kept much of what is now the Chicago Region under water. Lake Chicago as it retreated from the rise of global temperatures, a sandy coastline remained which is now known as the Chicago lakefront.

The geological base consists of Silurian bedrock more widely known as dolomite or limestone. This limestone bed is the remnant of large seas that historically covered this landscape. Along with the glaciers and the Lake Chicago period, the landscapes history have combined to shape the terrestrial systems that arose following these events.

At the time of exploration by Europeans of this area, the land was still wild and free and home to a rich diversity of plant and animal life. Buffalo and other large land mammals were noted by early explorers but have since disappeared due to human settlement and expansion. The natural shoreline of the lake was very sandy and covered in marshes, savannah, prairie and other scrub. From historical maps, it is easy to determine that the area of South Chicago was home to marshland near the mouth of the Calumet River and gradually turned into a scrub and Oak Savannah towards the northern limits of what now is the South Chicago community.

These native systems have changed drastically over the period of human settlement. The marshes and prairies have all but disappeared while no remnant of any pre-colonial landscape exists in South Chicago. The expansion of eastern rail lines along with the dredging of the regions rivers have changed the area forever. However, the destruction and change that was undertaken in this area allowed the region to economically prosper. The establishment of the region as an industrial center allowed Chicago to become what it is today while this rich history, which has been fading for decades, lives on in the hearts and minds of the people that are still familiar with its story.

The geographic location was the major reason for the areas successes but also made things very difficult for the original settlers. Located on Lake Michigan and with the eventual water access to the Mississippi River, the region was a prime spot for distribution, with the expansion of the railroad bringing even more success. The rough landscape that preceded all this did take its toll on early settlers. The regions vast areas of marsh and sandy land made it difficult for building and farming as well as setting up industry. It took decades to clear land and re-grade the landscape to make it economically productive yet destroyed some of the most amazing landscapes in all of North America.

regional context

South Works is located 10 miles south of downtown Chicago along a continuous stretch of lakefront that ends at the northern boundary of the site. Along this lakefront corridor is some of the most prestigious lakefront property in the region. Do to the direct access to the lakefront and the park space along it, property along this corridor is extremely valuable. However, as the distance from the city center increases, property values do tend to decrease as one nears the project site. Also along this corridor are the many great Chicago museums which begin with the Adler Planetarium and the Art Institute near the city center, to the Museum of Science and Industry which is 6 miles south of the city and only 4 miles from the South Works site.

The lakefront properties in this corridor are predominantly residential high rises that take advantage of lake and city views. These residential structures provide housing for the middle to upper class workers for the city of Chicago and the communities that these structures are set in tend to be estranged from the people that live in these buildings. This is important since similar structures are being proposed by the South Works developers at the apprehension of the South Chicago community where the equity in access to the lakefront is of highest concern.

The Indiana state line is just to the southeast of the project location, and the sites proximity to industries along the lakeshore in Indiana and also in the Calumet River area helped to support its success as well as the numerous other industries in the region. Access to water and transportation were the main factors in industry settling this area as well as the proximity to markets not only in Chicago, but by way of the transportation networks already mentioned. Throughout the regions history, vast changes have been made to the areas natural features, most notably the lakefront itself as well as the Calumet and Little

17.

CALUMET RIVER, ILLINOIS

The Lake Calumet area in 1881. The South Works site is at the upper middle of this image.
(Published by the U.S. Senate in 1881, image from A Natural History of the Chicago Region by J. Greenberg)



18.

DEAD RIVER, ILLINOIS

Within the Illinois Beach State Park, the Dead River is considered the original character of the Chicago and possibly the Calumet River.
(Photo by R. Grosso and S. Wright, Illinois Beach State Park, Zion, image from A Natural History of the Chicago Region by J. Greenberg)



19.

VEGETATION OF THE CHICAGO LAKE PLAIN

This diagram shows the vegetation systems of pre-settlement South Chicago.
(Diagram by P. Hanson, 1981, image from A Natural History of the Chicago Region by J. Greenberg)



Calumet River corridors along with Calumet and Wolf Lakes among others.

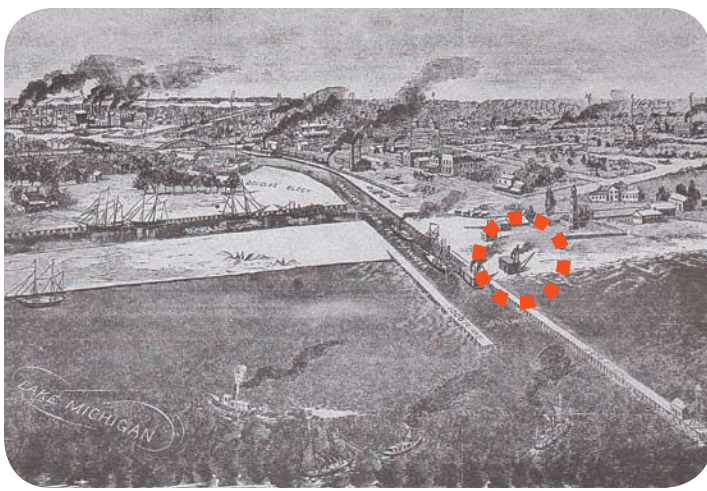
Along the lakefronts of Illinois and Indiana, industry either claimed existing property or built their own land with fill consisting of imported earth, construction debris or other waste materials as is the case with the South Works project site. The continued development of these industries, which were mostly steel foundries and other mills, brought in workers and settlers from the east along with immigrants directly from other countries, most notably those of eastern European descent. These workers and their families provided the seeds for the mill and foundry towns that sprung up around the respective industries which is the case with the steel mill that has continually changed its ownership along the South Chicago lakefront.

the south chicago community and south works

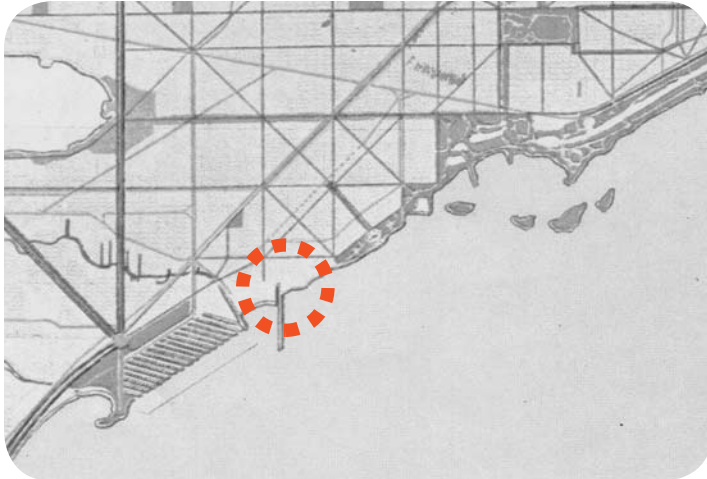
South Chicago is the home of South Works and the community owes its existence and history to the factory that once stood along its lakefront. The beginnings of South Chicago were in the form of a group of several blocks which is still known as the Bush neighborhood today. The "Bush" as it is called gets its name from the early Chicago city dwellers that would come to this area to get away from the dirt and grime of the city to swim in the lake and picnic on its beaches. The original landscape gave rise to the name the "Bush" in that the area was known for its sandy and marshy landscape composed of low shrub-like vegetation. The name stuck and the community ended up being a destination for people wishing to work in the new steel foundries and other mills in the area as well as an enclave for workers at the South Works site. Other development was based along the Calumet River. Mills and other factories settled here for the location and its water and rail access to markets in Chicago and distant cities in the east and the fledgling markets in the west.

For a more detailed series of historical events in the site's and region's history, consult the timeline below:

<i>pre-colonial -</i>	<i>South Chicago area settled by Ashkum, an Indian chief of the Pottawatomies and 'lord' of the Callimink Valley, the site area was an Indian Camp and fishing village</i>
<i>1830's -</i>	<i>First land speculation in South Chicago</i>
<i>1840's -</i>	<i>Small industries begin to lay railroad tracks between Chicago and the Calumet Region</i>
<i>1848 -</i>	<i>Illinois & Michigan Canal completed original plans included the mouth of the Calumet River as the head of the canal but representatives felt that since Illinois was footing the bill, the prime spot would be better centrally located at the mouth of the Chicago River</i>
<i>1851 -</i>	<i>Lake Shore Railroad brings service to the region</i>
<i>1857 -</i>	<i>North Chicago Rolling Mill Company opens north of the city</i>
<i>1870-73 -</i>	<i>Calumet River entrance modified for safe ship entry and movement</i>
<i>1871 -</i>	<i>Chicago fire</i>
<i>1880 -</i>	<i>The North Chicago Rolling Mill Company breaks ground at a size of 74 acres at the current site</i>
<i>1883 -</i>	<i>Illinois Central Railroad begins service</i>
<i>1889 -</i>	<i>First Steel produced at the North Chicago Rolling Mill Company at current site</i>
<i>1889 -</i>	<i>North Chicago Rolling Mill Company merges with Union Steel, Joliet Steel, and the Bayview plant of Milwaukee Steel to form Illinois Steel</i>
<i>1889 -</i>	<i>Bush neighborhood annexed by the city of Chicago</i>
<i>1893 -</i>	<i>The World's Columbian Exposition</i>
<i>1898 -</i>	<i>South Works expands to 260 acres</i>
<i>1901 -</i>	<i>US Steel Merger, creating the company as the largest steel producer in the country (50% of market share) and naming the site South Works by USX</i>
<i>1909 -</i>	<i>Burnham and Bennett Chicago Plan unveiled</i>
<i>1922 -</i>	<i>Calumet Sag Channel completed</i>
<i>1924 -</i>	<i>U.S. Army Corps of Engineers deposits dredged material along the shore of Lake Michigan taken from Lake Calumet, not at project site</i>
<i>1930-60 -</i>	<i>South Chicago reaches maturity</i>
<i>1936 -</i>	<i>USX has reached 573 acres</i>
<i>1975 -</i>	<i>Alloy bar mill closes, first of many closures after the boom years</i>
<i>1978 -</i>	<i>First foundry closes</i>
<i>1979 -</i>	<i>South Works employee numbers down to 10,000, from a peak of 20,000</i>



20. **1874 VIEW OF THE CALUMET RIVER AND HARBOR**
The South Works site is beginning to be formed on the near front of the image.
(Unknown author, property of the Chicago Historical Society, image from *Illinois: A Geographical Survey*)



21. **1909 PLAN OF CHICAGO**
Burnham and Bennett's plans for the South Works site did not include any lakefront park space for the south side. Instead, it was envisioned as one of two major ports for the city, the other being at the mouth of the Chicago River.
(Image by D. Burnham and E. Bennett, *Plan of Chicago*)



22. **SOUTH WORKS AT NIGHT, 1947**
A permanent fixture of the South Chicago lake front, the facility never stopped until it closed in 1992.
(Image from the Chicago Historical Society, published in *Chicago's Southeast Side* by R. Sellers and D. A. Pacyga)

1980's -	<i>Closing of many area industries leads to bitterness and hardship in the areas population</i>
1982 -	<i>2/3 of existing workforce lay off</i>
1992 -	<i>South Works closes with just 700 employees on the payroll</i>
1992-97 -	<i>US Steel works with Illinois EPA on voluntary site overview</i>
1994 -	<i>US Steel puts South Works on the market</i>
1997 -	<i>Illinois EPA clears South Works for Residential Grade development</i>
2001 -	<i>Solo Cup purchases 120 acres south of the north slip for a new factory</i>
2004 -	<i>Street extension for Solo Cup access</i>
2004 -	<i>Dredged Sediment placed on areas of the site for future park space</i>

Since the North Chicago Rolling Mill Company moved to the South Chicago in 1880 on the community's southern lakefront, steel has been the life blood of the community. Although the steel foundry has changed its name over the course of its history, the character of the neighborhood has always been steel, and steel, for the longest time is all what the people in this neighborhood has come to know. As the facility closed its doors in 1992, the end of the steel era brought forth the decline of the South Chicago community. As the facility closed under the United States Steel Company, jobs and the livelihood of thousands of people went with it.

At its peak, South Works employed nearly 20,000 employees making this facility not only a place to work but a place to live. The facility operated 24 hours a day and never stopped, not for holidays, not for nothing. The night sky would be aglow with the light from batches of molten metal bursting out within the facilities numerous buildings. Because of the hard work of the employees along with the sheer size of the company, the facility was home not only to work but to several other activities. Baseball, bowling and other leagues were formed from the workforce as well as bands and other organizations. The facility also housed its own hospital and outfitted itself with its own security and fire prevention forces. In many ways this site was home to a city rather than just one company.

As the steel facility declined and eventually closed, jobs were lost and people emigrated from the area. Population has continued to go down in this area since the 1940's and those that have decided to stay are experiencing levels of poverty with the people and the community in great need of revitalization. The South Chicago neighborhood is experiencing 26% of its households at or below the poverty level along with other social problems that go along with the lack of quality employment and other neighborhood amenities.

Besides employment the area suffers from a lack of open space, most notably outdoor recreation areas. Despite the opportunities that exist on the South Works site to add much needed recreational areas, the neighborhood only has 2 public parks of decent size. Russell Park in the Bush district contains a few sports fields with little other open space and Bessemer Park, near Bowen High School in the southern section of the community has the same make-up. There have been requests by the community members to provide tot lots on some of the vacant properties within the community to provide local play areas for younger children but the open space infrastructure is insufficient for adult recreational areas. The redevelopment of the South Works site is subsequently of extreme importance in not only providing the community with much needed open space but in creating new places to live and work.

From 1992 through 1997 United States Steel worked with the Illinois EPA in order to approve the site for redevelopment. This process was apart of the state's voluntary cleanup program. In 1997 the EPA has cleared the property for residential quality development which would also allow new industry and open space to be apart of the redevelopment scheme. Since its closing, the site has been stripped of all of its massive structures with 2 giant ore walls and the foundations of buildings composing all that remains. The ore walls line the north slip at the center of the site, one of two slips including the other south slip which is smaller and lacks remaining ore walls. These slips were used to bring in barges of materials such as the ore used in making steel along with coal and limestone also used in this process. The ore walls were used to house the ore during the winter to keep the facility up and running throughout the year. The building foundations that remain retain a level of stability for the slag and construction debris landfill that composes the earth making up the entire land area of the facility. However the fill and foundations will be able to be removed in order to re-grade the site and make appropriate connections with the surrounding community.

As part of the research presented in this work various plans for the redevelopment of the South Works site have come to light. Previous plans for the South Works site have included much of the needs and desires of the community members. Plans by a variety of firms have taken on a similar organization in placement of certain uses on the site in nearly the same

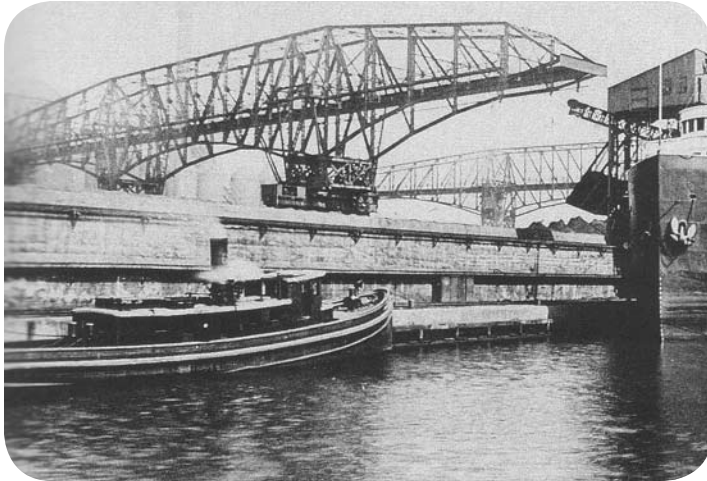


23.

SOUTH WORKS EMPLOYMENT OFFICES

The sign represents several different languages as the facility and South Chicago was home to many immigrants, particularly from eastern European countries.

(Image from the Chicago Historical Society, published in Chicago's Southeast Side by R. Sellers and D. A. Pacyga)

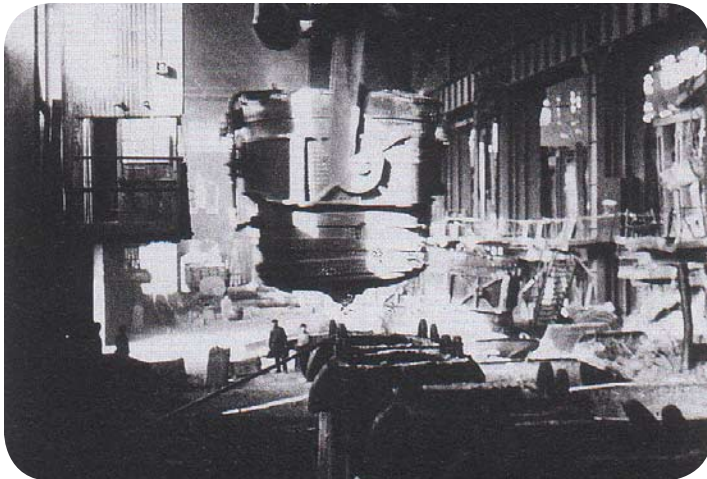


24.

NORTH SLIP

The North Slip was the heart of the steel operation on this site, large ships transported iron ore, limestone and coal to the site and were unloaded by large overhead cranes as pictured here. These materials were stored between large ore walls spanning 10 feet wide, 30 feet tall and a quarter of a mile long.

(Image from the Chicago Historical Society, published in Chicago's Southeast Side by R. Sellers and D. A. Pacyga)



25.

LADLE CRANE

Giant cranes transported heated ore through the mega facility.

(Image from the Chicago Historical Society, published in Chicago's Southeast Side by R. Sellers and D. A. Pacyga)

locations. These plans have tended to site new industrial development on the southern half of the property which is part of the Calumet Industrial Corridor due to the access to rail and water transportation available and makes the southern half of the property far superior to the northern half for this land use. The northern section has been planned for new residential properties that provide opportunities for mixed income development. The city of Chicago, as part of the deal to redevelop this property with US Steel, would take over 120 acres of lakefront property to add to its continual lakefront parkland. This space is intended to link with the existing parkland to the north and provide lakefront access for the South Chicago neighborhood for the first time in over 125 years. The previous plans have located all of this land on the northern half of the site along the lakefront.

The other major component of the redevelopment of this property is the rerouting of Route 41 that currently meanders through the interior of the community. Route 41 is also Lake Shore Drive to the north and is planned to be rerouted along the southern edge of the South Works site. This rerouting creates numerous problems; the most demanding would be the large earth moving that would have to take place along the north half of the site due to the large grade disparity between it and the surrounding community. The grade difference is especially noticeable along the northern section's western edge where an 8 foot wall retains and separates the site from the various roads that run along its perimeter. This excess fill could be used for a variety of purposes which will be discussed later in this document.

The long term status of the South Works site is currently up in the air. Several developers have contacted US Steel to purchase land and only one sale has completely gone through. Solo Cup, Inc. has purchased a large parcel immediately to the south of the north slip. The finalization of the purchase has gone through but the fact remains if Solo Cup will ever build a factory and distribution center on the property. The southern parcel below the Solo Cup property remains in the hands of US Steel as well as the northern section. However a development group is intending to purchase this northern parcel and has begun concept and master plan production with several design firms. This development project is a joint venture of Lubert-Adler Real Estate Fund IV, McCaffery Interests Inc. and Westrum Development Co. They have requested design development ideas from Skidmore Owings and Merrill in conjunction with Sasaki Associates. Final versions of the development plan are due to be release in late spring 2005.

Many of the factors discussed above help to reiterate the purpose of this study which is to provide a vision for the redevelopment of the South Works site that insures the incorporation of the community needs and desires along with making a feasible concept that will not only inspire the community but also the people in the region and the developers that are necessary to make this project a success. Although the schemes of the firms listed above are already happening, like the situation with Solo, Cup, one wonders if the new ideas will ever go through. That is why this study is so important; its purpose is to add to the debate and ideas about the future of the South Works site.

south chicago community profile

The South Chicago neighborhood is home to just over 40,000 residents with 93 percent being minorities. The population has been declining since 1940 as industries have closed or relocated. Except for African Americans whose population continues to rise within the community, all other ethnic groups are declining, transforming this once diverse neighborhood of eastern Europeans, Hispanics and African Americans into a more diluted racial mix with a clear majority. The majority of this community population is between the ages of 25 to 44, which is primarily the most productive wage earners. The youth of the community represents around 25% of the population of ages fewer than 16.

Annual individual income of wage earners in the community is well below the city median. The median South Chicago income is \$12,500, \$7,500 below the city of Chicago's median. Poverty likewise is an extreme problem with 26% of households at or under the poverty line. The net wealth of the households in the community are similarly low with a median of \$44,000. Only 32% of households are considered middle class and is not unusual considering the low income nature of the community. Unemployment is also an indication to the problems within the community given that 11% of South Chicago residents are unemployed, well above the 3-4% national average.

Some could also relate the health situation to the social indicators already listed. The community has seen a rise in infant mortality and birth rates from 1889 to 1999. Also, homicide has increased slightly in the same time span. Although the community has adequate health care the problems within the community seem to be emanating from the lack of jobs and other amenities in the area and do not reflect the health resources in the community.

Property values within the community are at the lower end of the spectrum when compared to all values within the city. While the city median is at \$132,000 the community median is \$85,000. Like most communities the majority of property is devoted to residential with single family detached units being the most common with a total of 12,500 of them



26.

SOUTH WORKS AFTER CLOSING

*Skyline view above the northern edge of the site.
(Photo by Okrent Associates, provided by Pamela Austin, McCaffery Interests)*



27.

NORTH SLIP AND ORE WALLS

(Photo by Okrent Associates, provided by Pamela Austin, McCaffery Interests)



28.

SOUTH WORKS SITE AFTER BUILDING REMOVAL

(Photo by Okrent Associates, provided by Pamela Austin, McCaffery Interests)

occupied. These units have a median value of \$80,000 compared to \$43,000 per unit for single family attached and \$75,000 for multi-family dwelling units. Multi-family housing units carry the largest 1 year value increase of 36% while single family detached follows with a 10% increase and single family attached units actually falling slightly. The best value for investment seems to be the multi-family units, and of new construction these are the largest percentage of new projects.

Of the total housing units within South Chicago approximately 7,000 of them are owned while 5,500 are rented. The rate of rental will probably continue to increase as family and personal income continues to limit new ownership. Of the rental prices for these units the median prices are near the city's lowest, with the majority being under \$750 a month. However, units in some of the high rises and some homes are near the middle of city-wide rates and very few rates are at or near the top.

The community is home to several elementary schools and one high school. Of the 7 elementary schools attendance has remained steady at or above 90%. Attendance at Bowen High School is lower at only 85%. Students at all of the community schools tend to be from low income households averaging between 80-90% of the school populations. Quality of schools determined by testing scores is erratic with some schools doing much better in reading and math than others. This difference has shown not to be from number of students as all of the elementary schools have around the same number of students and must result from some other factor.

The community is composed of several main arteries and corridors that make-up its transportation and circulation. Along the east side Lake Shore drive ends and is named route 41 within the community as it makes its way north-south through the community and crosses the river at 92nd street. Route 41 is the major road servicing the community although interstate 90 runs parallel to the communities southern extents. As already stated the rerouting of 41 is a large part of the redevelopment of the South Works facility. Along interstate 90 to the north running northwest to southeast is South Chicago Avenue which eventually intersects with the east west route 12 just to the south. Major east-west corridors are on 79th street which is the northern boundary of the community and 87th street near the south. Yates Boulevard running north-south through the center of the community is the major corridor in that direction along with Commercial Avenue a major historical corridor within the community.

South Chicago's best asset is that it is well served by public transportation. Transportation within the community comes by bus with service from the Chicago Transit Authority and commuter electric rail service provided by METRA. South Chicago is served by; the number 30 bus that operates along South Chicago Avenue with stops at 79th and 91st Streets, the 79th Street bus, the 87th Street bus, the 95th east Street bus, the number 15 bus along Jeffery Boulevard and the number 70 and 26 buses that run along route 41, 83rd Street, Exchange and Commercial Avenue. METRA service is along north Commercial Avenue switching to South Baltimore Avenue with stops at 79th, 83rd, 87th and 93rd Streets. The 79th and 87th Street buses also connect to the CTA Red Line along the Dan Ryan Expressway with service to downtown. All of these transportation services provide the community with excellent options for getting around South Chicago and the city as a whole. With a few expanded services with the development of the South Works site, providing access to the South Chicago community should not be a problem.

south works

So far we have looked into the historical background of the region's and community's history along with their current conditions. Now we turn to a more detailed discussion of the South Works site, its changes over time and the vision's for its future both in contemporary and historical perspectives.

Much of the early history of the South Chicago area has already been discussed, yet we need to place the evolution of the South Works facility within that framework for a full comprehension of its history and its place in the community. The South Works facility, as it has been called for the last 104 years, was initially a 74 acre parcel that grew out of the sandy shore along the South Chicago lakefront. The land for this facility was created from a variety of construction debris and similar materials in 1880 for the establishment of the North Chicago Rolling Mill Company that decided to move to this location after the great Chicago fire of 1871, from their location just north of downtown. Over time, the accumulation of slag from the steel making process, along with additional construction debris helped to add to the expansion of the site's area. By 1889 the site had expanded to 260 acres and eventually reached its current size of 573 acres. The majority of this land is made up of fill except for a small portion of the site south of the Bush Community.

Throughout the years the mouth of the Calumet River at the southern end of the site has been a key component in the expansion of industry in the South Chicago Area and greater Calumet Region. The great vision for Chicago planned by Daniel Burnham and William Bennett released in 1909 had the harbor of the Calumet River playing a large role in the development of Chicago as well. Burnham and Bennett envisioned a great network of

29.

SURFACE CONDITIONS

(Photo by the Metropolitan Water Reclamation District)



30.

SURFACE CONDITIONS

Surface fill composed of steel slag, concrete rubble and clay bricks.

(Photo by the Metropolitan Water Reclamation District)



29.

SURFACE CONDITIONS

Shoreline along the southern edge of the site.

(Photo by the Metropolitan Water Reclamation District)



railroads and waterways to supply the city with its goods. The mouth of the Chicago and Calumet Rivers were to be the two primary ports for goods entering and leaving Chicago. Their plan showed multiple concepts for the Calumet Harbor that showed numerous docks serviced by rail that would help unload and distribute goods from ships. At this time the site was owned by Illinois Steel at a size of over 260 acres. Although the plan did not show any real plans for the site it does show that there is a historic precedence for industry and dock service in the area.

Needless to say, the grand vision for Chicago was never completed as Burnham and Bennett saw it, especially as it relates to the South Chicago area. However, just as then is as now, there have never been any real plans for the lakefront for the South Chicago community. The Burnham Bennett plan shows the lakefront parkland stopping at the north end of the site just as it does today. This is due to change with the desire for the community and the city to expand lakefront access to the community as well as develop to redevelop the site for residential and new industrial uses.

Since the decline of the South Works facility started its decline in the mid to late 70's until the day it closed there has never been any real discussion of what was to follow. However, in the last several years discussion has heated up as US Steel, the current owner of the site has been approached for sale of separate parcels of the facility. Although one parcel has been sold and the designing of another is on the boards the future of the site is not yet fully determined. In order to design and implement a plan that the community, city and developer can agree upon, several obstacles must be overcome. For a synopsis of these and other analytic studies please consult the attached documents.

MAPPINGS (pages 034-069)

This section is composed of analytical diagrams and maps that graphically represent the design process from context through site inventory and analysis. These were used as a base for the conceptual design and design development represented in further sections.



key

1. Downtown Chicago
2. Grant Park
3. Chicago River
4. Lake Michigan
5. Lakeshore Drive/41
6. Illinois & Michigan Canal
7. Washington Park
8. Jackson Park
9. Skyway/Interstate 90
10. Rainbow Beach
11. Rainbow Park
12. **Site 573 acres**
13. Calumet River
14. Calumet Harbor
15. Calumet Park
16. Illinois/Indiana State Line

INVENTORY

regional context



- key**
1. Rainbow Park and Beach
 2. Rosenblum Park
 3. Avalon Park
 4. Ekersal Stadium Park
 5. Russell Square Park
 6. Stoney Island Park
 7. **Site 573 acres**
 8. Bessemer Park
 9. Calumet Harbor
 10. Calumet River
 11. Calumet Park

South Shore

South Shore is a predominately African-American neighborhood. Along with a few nearby neighborhoods, it is a relatively stable and gentrifying neighborhood that has generally been long neglected. It features a balance of middle-class and lower-class African-Americans, is home to Rainbow Beach (one of the more popular beach spots in Chicago), and has one of the few retail districts on the south side which, thanks to urban renewal, is in many areas a residential desert.

pop.: 61,556 (up 0.06% from 1990)

White	1.14%
Black	95.5%
Hispanic	1.03%
Asian	0.14%
Other	1.18%

Median Income: \$27,748

Avalon Park

Avalon Park is one of the 77 official community areas of Chicago, Illinois. Boundaries are 76th St. to the north, South Chicago Ave. to the east and 87th St.

to the south. The community area includes the neighborhoods of Avalon Park, Marynook and Stony Island Park.

pop.:
11,147 (down 4.82% from 1990)

White	0.86%
Black	97.0%
Hispanic	0.76%
Asian	0.17%
Other	1.18%

Median Income: \$34,344

Calumet Heights

Calumet Heights, located on the south side of the city, is one of the 77 official community areas of Chicago, Illinois. It includes the neighborhoods of Calumet Heights and Pill Hill.

pop.:
15,974 (down 8.47% from 1990)

White	1.29%
Black	92.8%
Hispanic	4.68%
Asian	0.21%
Other	1.07%

Median Income: \$46,326

South Chicago

South Chicago, located on the south side of the city, is one of the 77 official community areas of Chicago, Illinois. It remains one of the more racially mixed communities on the south side.

pop.:
8,596 (down 5.35% from 1990)

White	2.94%
Black	68.0%
Hispanic	27.4%
Asian	0.13%
Other	1.54%

Median Income: \$28,279



key
Historic Areas

1. Bush Neighborhood
Originally a favorite picnic spot of early Chicagoans, the "Bush" as it was called for its original sandy shrub-like landscape, gradually turned into a workers enclave as the steel mill on the South Chicago began and expanded in the late 1800's. The area was dominated by Polish immigrants into the 1960's, which saw a turnover in the Bush neighborhood as well as South Chicago as a whole. The area is currently like much of the rest of the area, composed of a majority of Hispanic, African American and other minorities.

2. Commercial Avenue
The historic soul of South Chicago is the Commercial Street corridor. As the industries in the area grew, Commercial Street provided a means by which those thousands of workers could get rid of their hard earned cash. Restaurants, banks and stores of all kinds crowded this bustling street. Although other areas of South Chicago have seen new business pop-up over the years, Commercial Avenue remains the center of commerce for the community.

3. Millgate
Throughout the years of expansion of the South Works facility, Millgate grew into the largest workers enclave in South Chicago. This district was predominantly made up of residential units and served as a screen into the community's commercial district to the west. This area has been hit the hardest by the movement of the population from South Chicago, empty lots dominate the areas along the manufacturing businesses along the waterfront and is home to the largest public housing project within the community.

Major Commercial/Business Areas



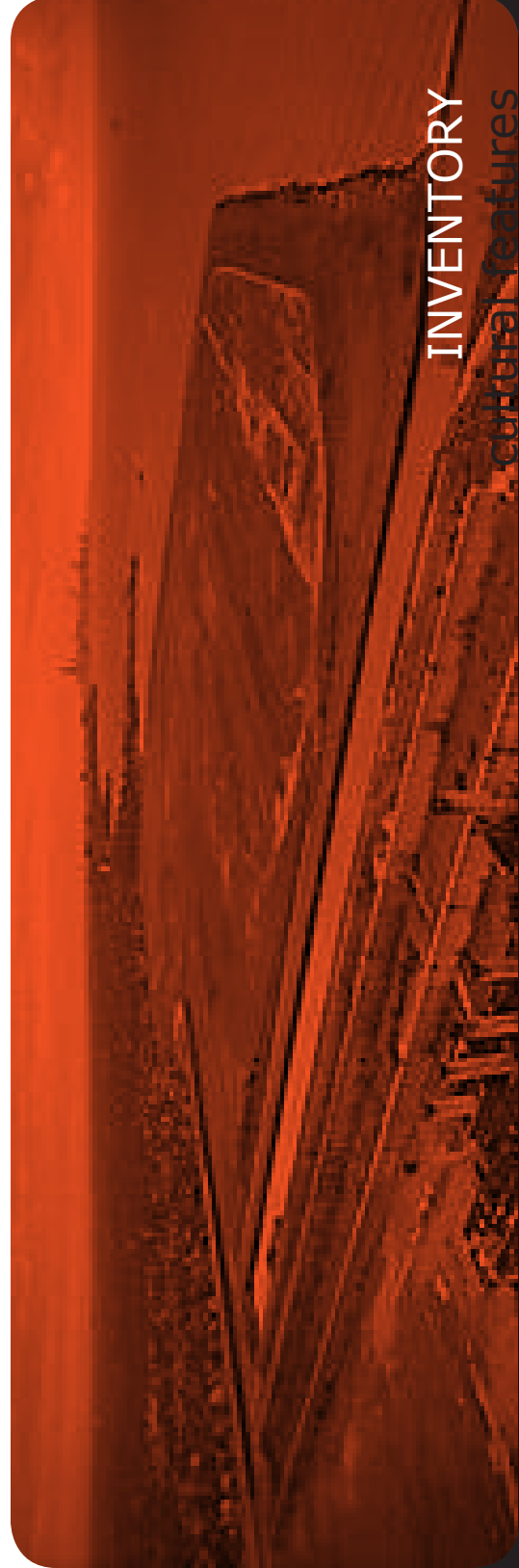
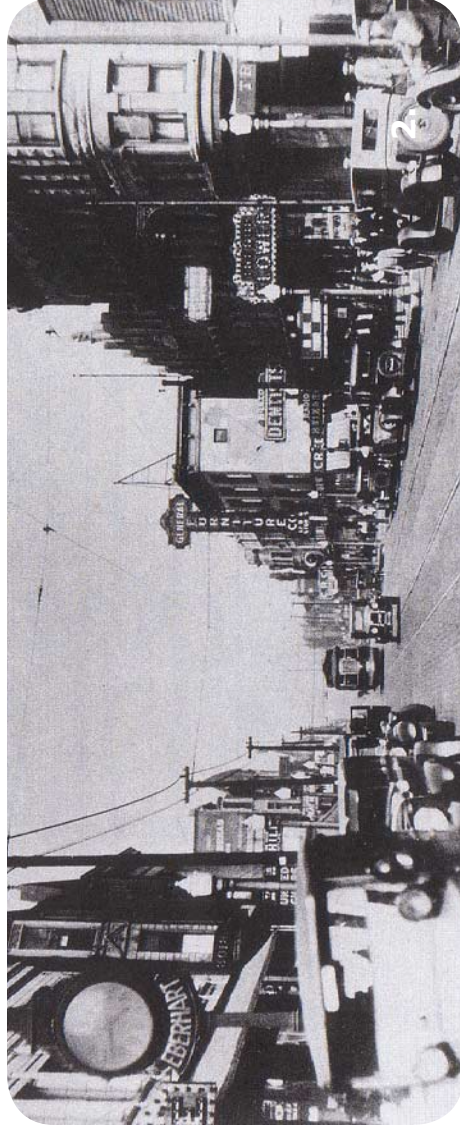
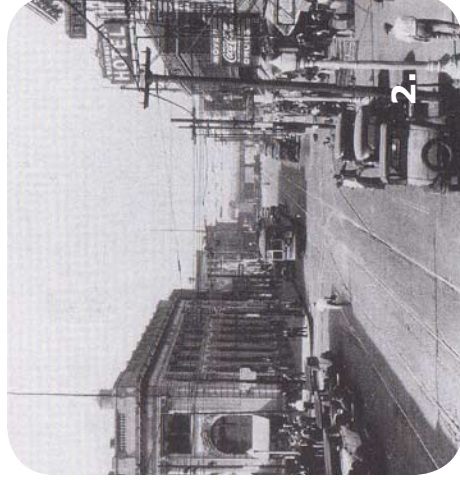
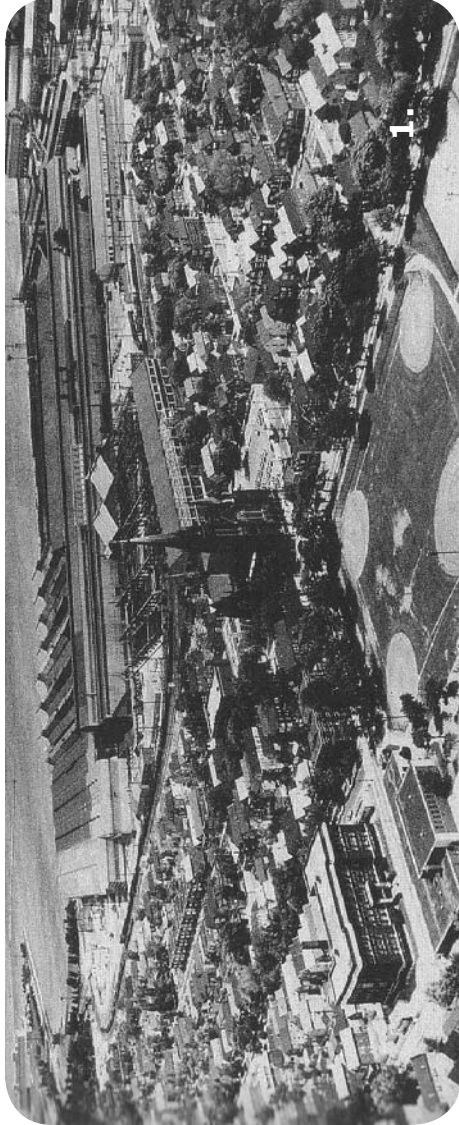
These areas are based on current commercial and business activities

Major Schools

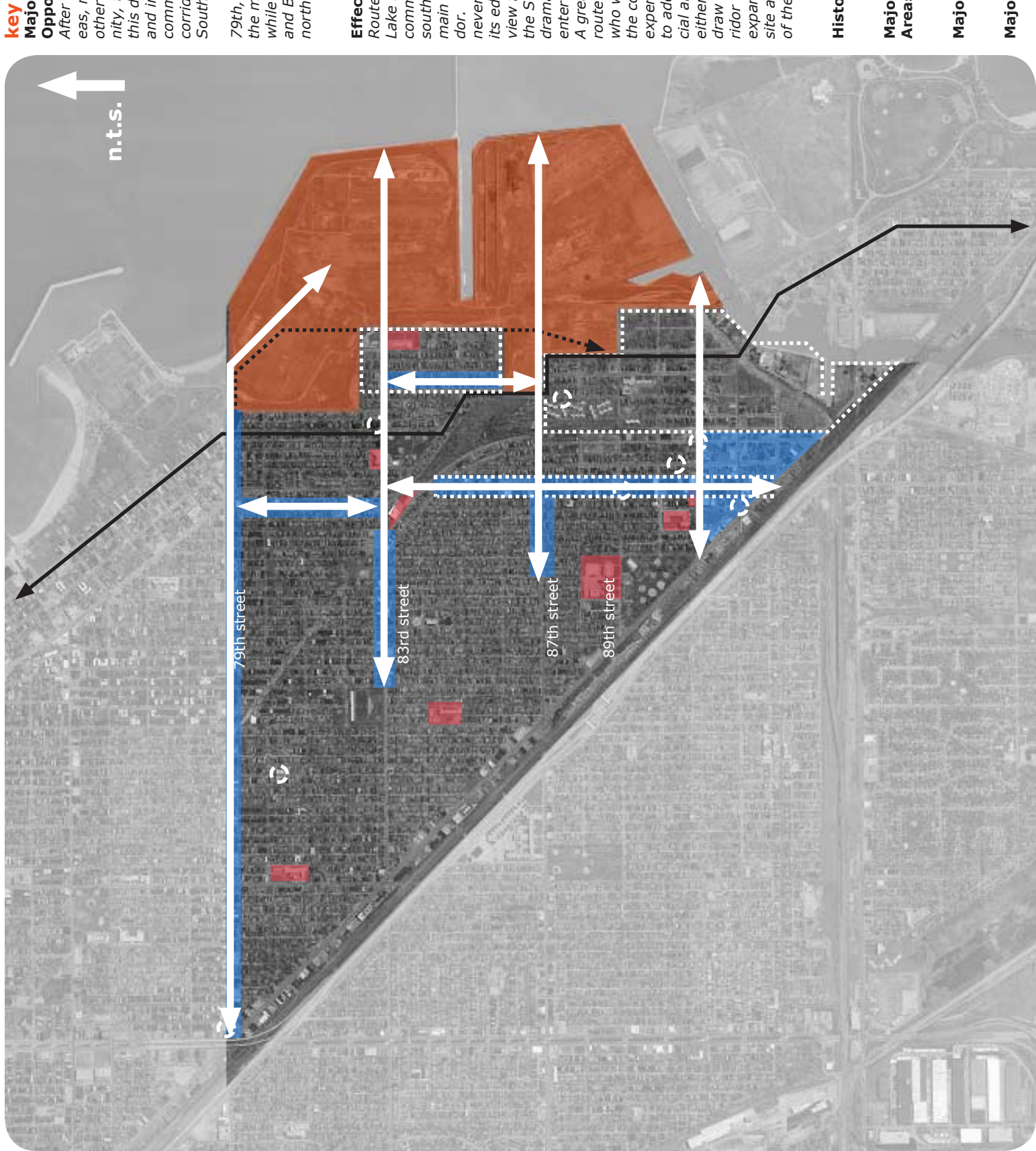
Bowen High School north of Bessemer Park tops the list of most influential educational institutions. The areas shown here are important in their ability to reinforce the business and cultural corridors mentioned above.

Major Cultural Sites

Sites such as the local YMCA, community hospital and others help reinforce the community's cohesiveness.



INVENTORY
cultural features



key
Major Cultural Linkage Opportunities
After comparing the historic areas, major cultural features and other areas within the community, the linkages represented in this diagram show opportunities and implied linkages within the community as well as how these corridors could link with the South Works site.

79th, 83rd, 87th and 92nd are the major east-west corridors while Exchange, Commercial and Burly Avenue are the major north-south corridors.

Effect of the Route 41 reroute
Route 41, or better known as Lake Shore Drive, enters the community in the north and south acting as the community's main gateway and traffic corridor. However, development has never set permanent roots along its edge. Route 41 is under review for a reroute that will enter the South Works site and have a dramatic impact on how people enter and view the community. A great opportunity exists to use route 41 as a tool to get those who would usually drive through the community to stay and visit, experiencing the community and to add to its diversity. Commercial and other businesses could either be located along it or help draw traffic from this major corridor to act as incubators for the expansion of the South Works site along with the revitalization of the existing community.

Historic Areas

Major Commercial/Business Areas

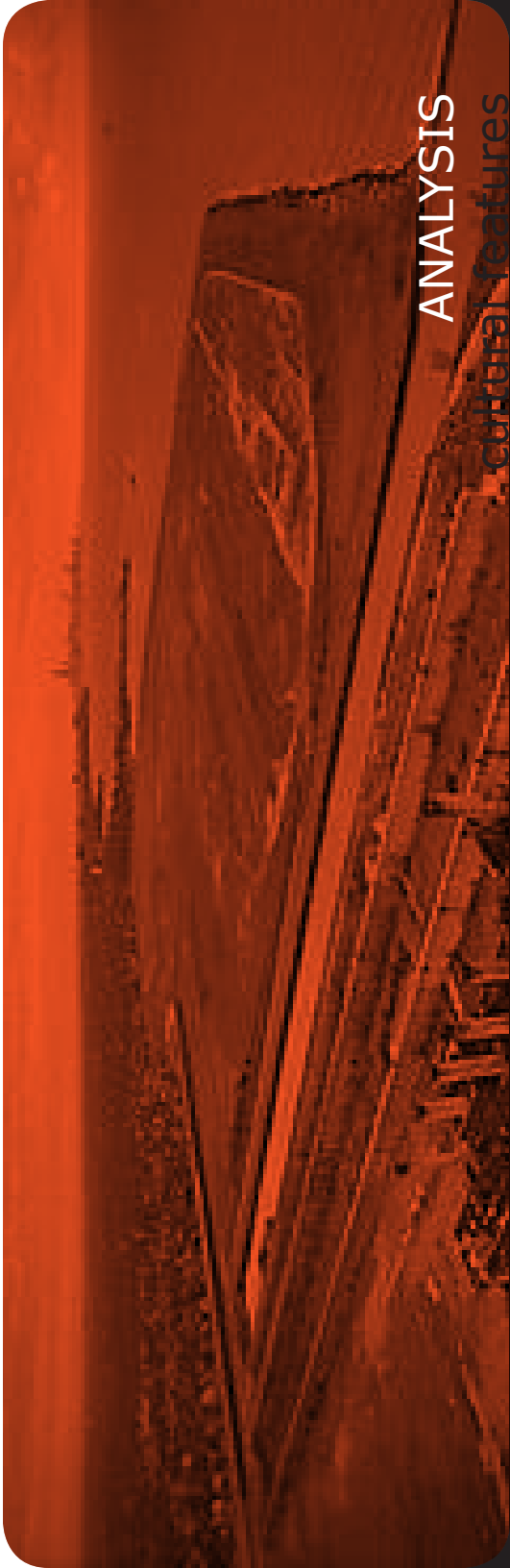
Major Schools

Major Cultural Sites

Route 41



Route 41 reroute



ANALYSIS

cultural features



key
South Chicago Parks

The parks of South Chicago are to few to support the needs of the community. Although Russell Square and Bessemer Parks have adequate facilities, the total recreational space is lacking in the community as well as other south Chicago neighborhoods. The development of South Works provides new opportunities to expand the park system in this area giving the people of South Chicago and other communities more recreational choices.

1. Russell Square Park
This park opened in 1905 as a response to many social pressures at the time. The burgeoning steel industry represented by the growth of South Works contributed to the need for recreational facilities and also housed English language classes to teach the growing number of immigrants that came to the area for employment. This park now offers baseball, basketball, swimming, tennis, weight lifting and picnic tables.

2. Bessemer Park
This park opened in 1904 under the same auspices as Russell Square Park. Bessemer offers baseball, boxing, basketball, tennis, running, swimming and picnic areas and also provides rest rooms.

3. Ekersal Stadium Park
Finally completed in 1956, Ekersal Park was dedicated in South Chicago under a post WWII plan to supplement open space to communities with substandard parks or those who have been under served by the lack of quality recreational areas.

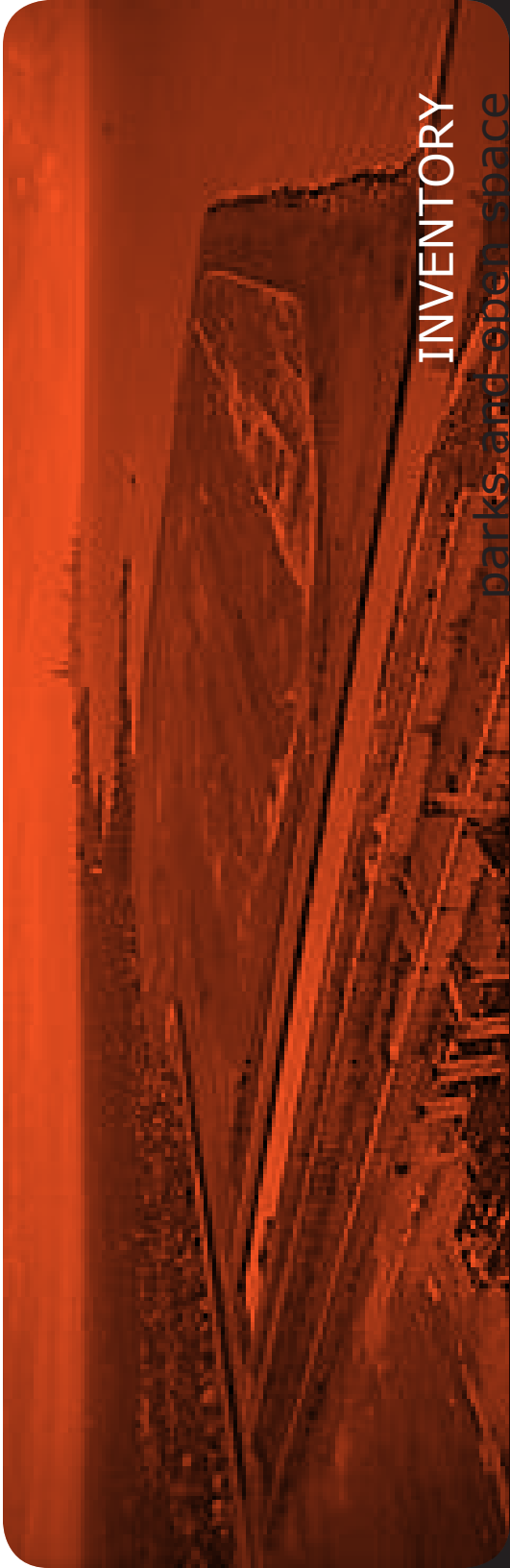
External Parks

4. Rosenblum Park
Opened in 1953, this park offers baseball

baseball.

- 5. Rainbow Park and Beach
This park was opened in 1908 although expansion between 75th and 79th Streets did occur in 1914. This new acquisition was called Rocky Ledge Beach due to the rocky landscape and the man-made limestone walls to protect the site from erosion. Known for its spectacular views of the lake and downtown skyline, this park is one of the most scenic in the Chicago area. This park contains beaches, baseball, basketball, tennis, parking and a new field house that was completed in 1999.
- 6. Avalon Park (off map)
Opened around 1930, this park is located along 87th Street, west of South Chicago in the neighborhood of the same name. This park contains baseball, basketball, weight lifting, running, swimming, tennis and picnic areas.
- 7. Stoney Island Park
This park contains baseball.
- 8. Calumet Park
The first 40 acres of this park were purchased in 1904 but the site was not completed until the 1930's. This park, like many of the other parks already listed were a product of the underserved nature of the southern Chicago neighborhoods. The completion of this park among others fostered more immigrants to move to the area and also to find jobs in the area mills. This park contains beaches, baseball, boxing, gymnastics, basketball, running, tennis, and picnic areas.

Potential Open Space



INVENTORY
parks and open space

key
Public Parks

External Parks

Major Park / Open Space Linkage Opportunities

After comparing the existing park and open space locations and the potential areas for expansion within the community and surrounding areas with the locations of the major street corridors, the core connections represented here show implied linkages between these amenities.

With the rerouting of 41, the remaining right-of-way could be converted to provide new bike lanes and walking paths to connect rainbow park and beach to Russel Square Park as well as the renovation of 41 on the south side of the community providing connections with Calumet Park.

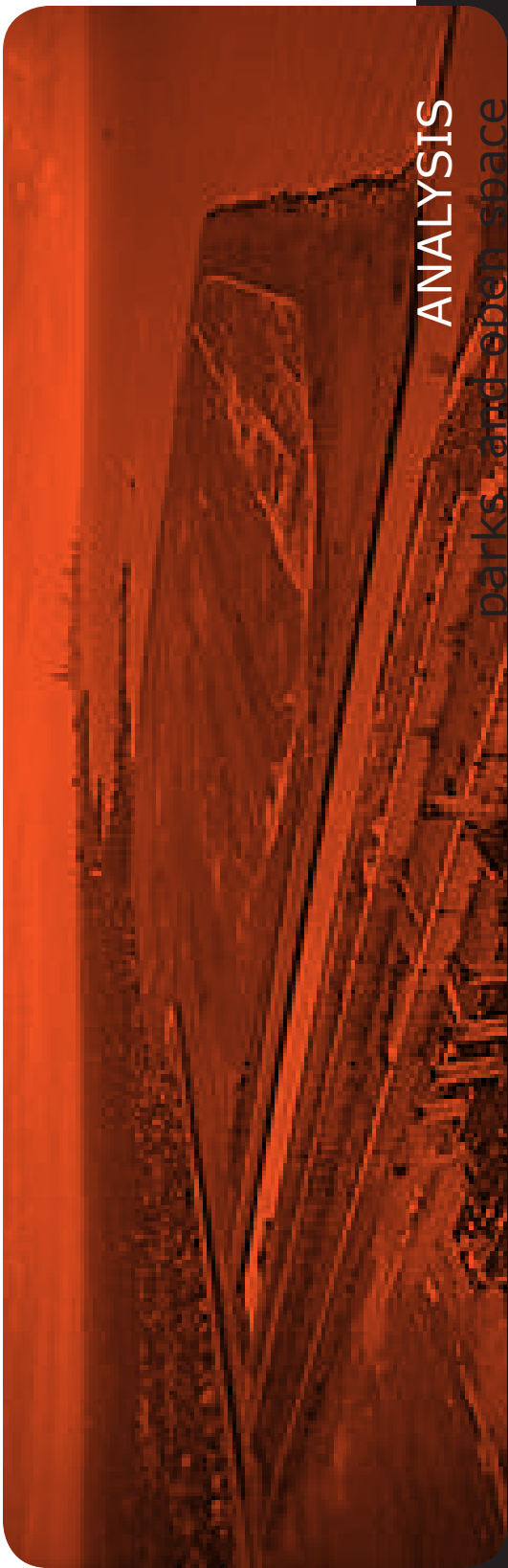
83rd Street contains 3 parks along its route and 89th Street contains 2, which identifies them as the two major east-west open space corridors. Jeffrey Boulevard could be used to connect Rosenblum Park to Stoney Island Park along the 92nd Street Corridor. Muskegon Avenue could connect the 83rd and 89th Street Corridors which is conveniently located at the center of the community. All of these connections inform the design of the South Works site in terms of the connections that are possible and could be made with the development plan.

Potential Waterfront Open Space and Trail Expansion

A great opportunity exists to connect the expanse of lake front park space and trail systems that stretches all the way from downtown into the South Chicago community with connections



Chicago community, with connections along the Calumet River and further into the rest of the southern Chicago neighborhoods. This would provide lake front access and transport along all of Chicago's lake front property.



ANALYSIS

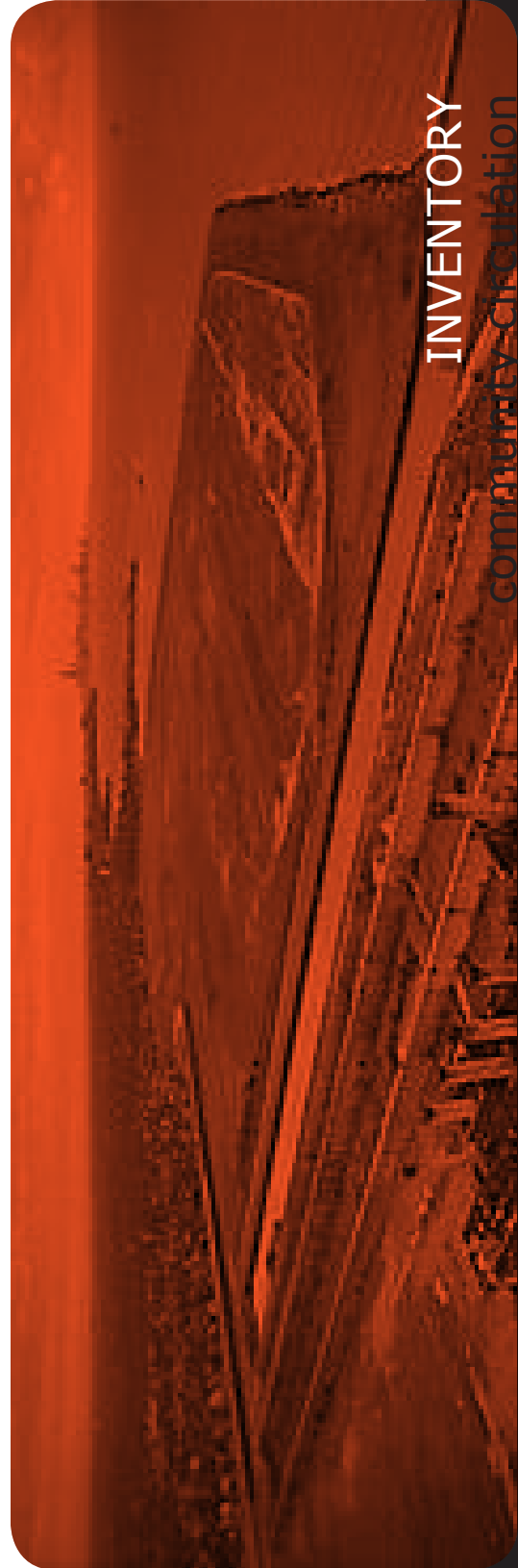
parks and open space

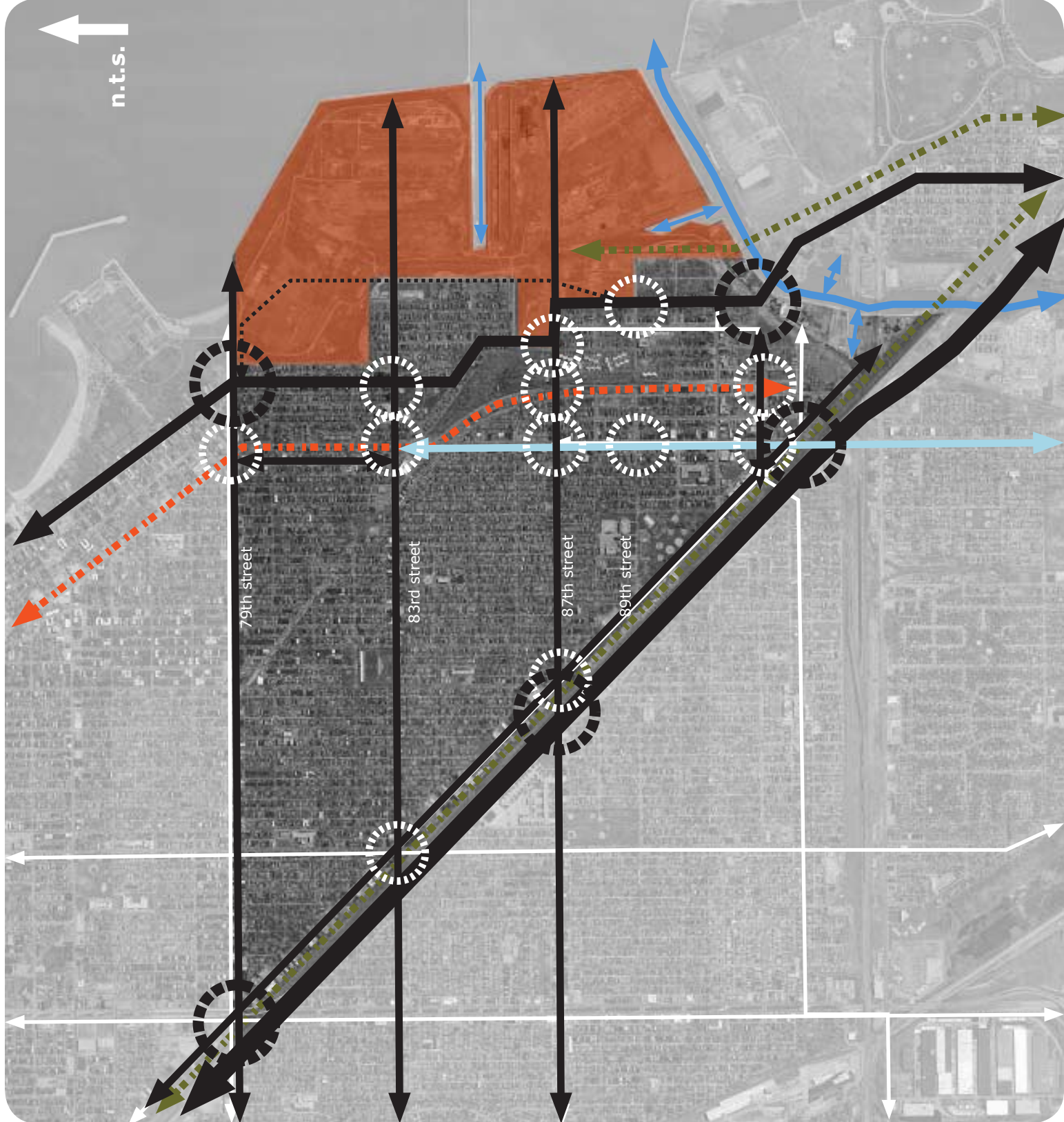
property may need this service,
thus it remains intact.

Route 41



Route 41 reroute





key
Major Community Gateways

Route 41 provides the major gateways into the site from downtown to the north and off interstate 90 to the south. 79th, 87th and Commercial Avenue are the major western and southern gateways.

Major Street Corridors

Route 41
Although new proposals have route 41 moving east within the South Works property along its western edge, 41 provides the best regional access to the community along with interstate 90.

Commercial Avenue
The historic spine of the community, Commercial Avenue remains a major corridor within the area. Historic buildings line its edges and it is the cultural and economic center for the community.

79th, 83rd, 87th and 89th Streets
Of the major east-west corridors, 79th, 83rd and 87th streets are the most heavily travelled with 79th and 83rd along with 92nd having bus service. 89th street has opportunities for establishing it as a major corridor as it could provide connections to Stoney Island and Bessemer Parks. 83rd, 87th and 89th provide the best access into the South Works site along with the rerouted 41.

Major Transportation Nodes

The communities major interior traffic nodes lay along the intersections of route 41 and Commercial Avenue and where 79th, 83rd, 87th and 92nd intersect with the electric rail line.

Existing Bus Service

Electric Rail Service



ANALYSIS

community circulation

Water Ways



Rail

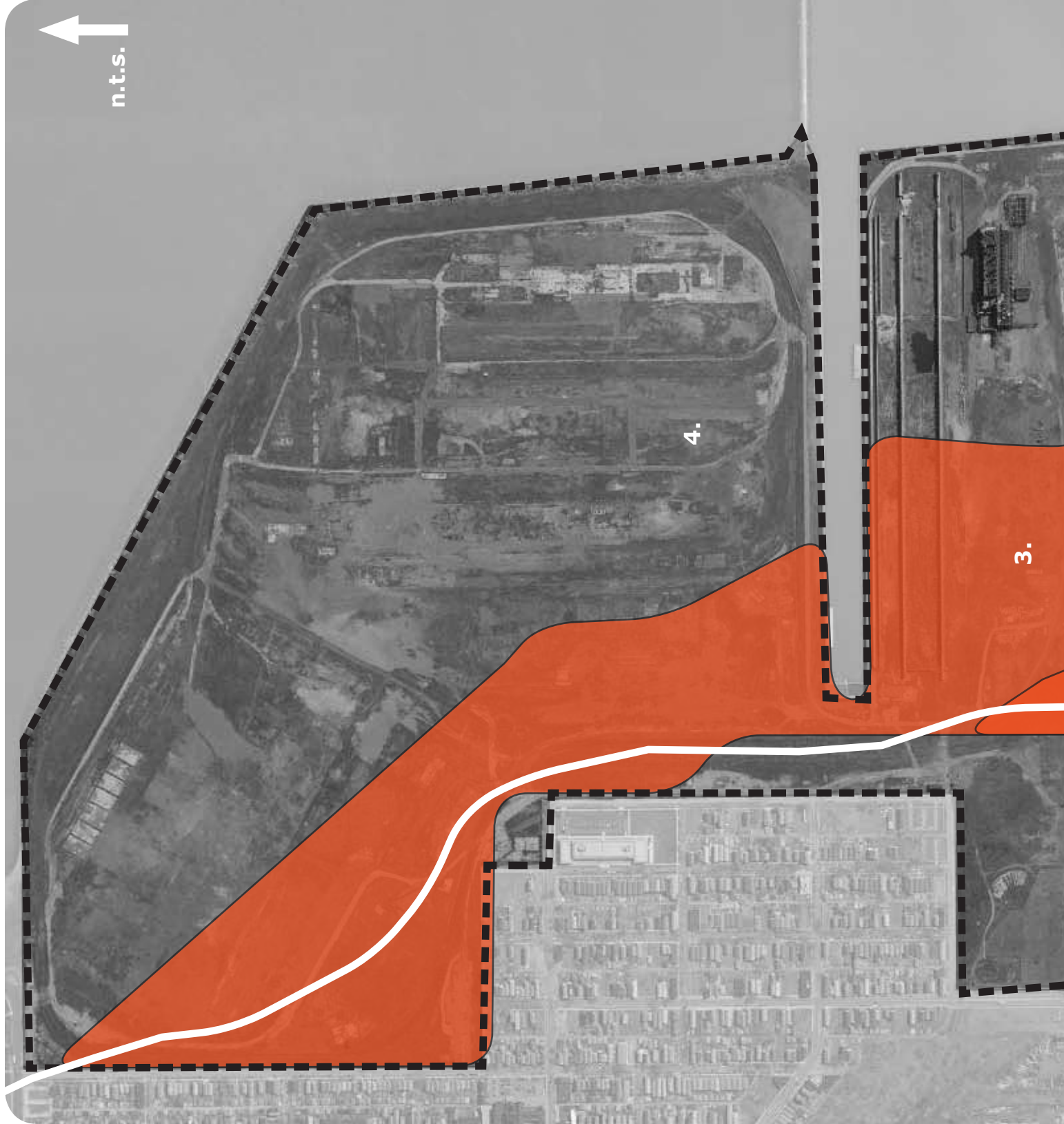


Route 41



Route 41 reroute





key

1. Hypothetical Original Shoreline

This line is based on several early maps of the region and is not intended to be scientific.

2. Site Extents Circa 1880

74 acres

This boundary has been estimated from the 1881 map commissioned and published by the United States Senate.

3. Site Extents 1898-1909

260 acres

This boundary has been based off of the concept drawing for Calumet Harbor by Daniel Burnham and Edward Bennett in their 1909 plan for Chicago.

4. Current Site Boundary

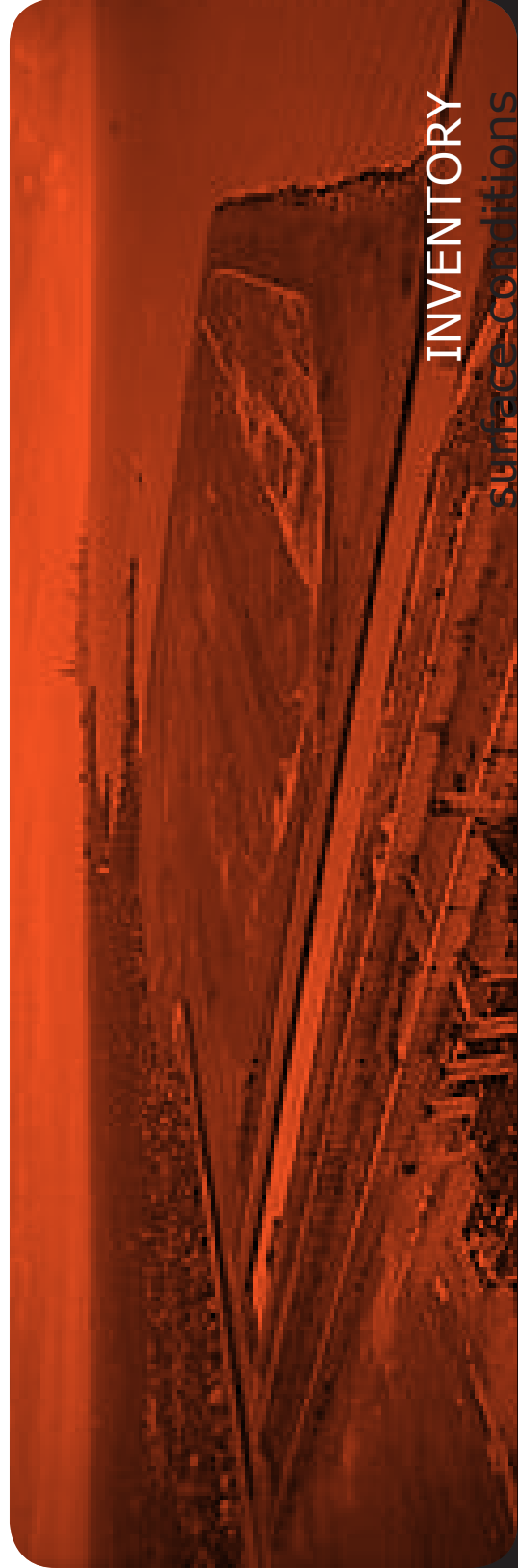
573 acres

By 1936 the site had reached its current size. Aerial views from 1936 show the site at its current size and it can be assumed the facility reached this size sometime between 1909 and 1936. This period saw the largest growth in size and productivity in the site's history.

Site Structures and Rails

As the facility grew, buildings were being torn down and rebuilt to suit new efficiencies in the production process. Railroads were also rerouted to join the separate stages of the process. All of the rails and all of the building structures have been removed. The only remnants that remain are the foundations of the structures and three large ore walls near the north slip. The fill that makes up the site is composed of the former build-





key

Fill Regrading Options

Since the site's existing topography creates numerous problems for development and linking the site to the existing community, regrading and exportation must be looked into to create a buildable area for the new development. The following are several options to solve the landfill problem.

Site Expansion

This option proposes to regrade the site in a manner that will create additional land for development. This new land will create more options for such amenities as beaches, marinas and restoration areas. The downfall of this option is the large amounts of fill that will be needed to be moved, creating a time consuming and costly situation.

Landform Creation

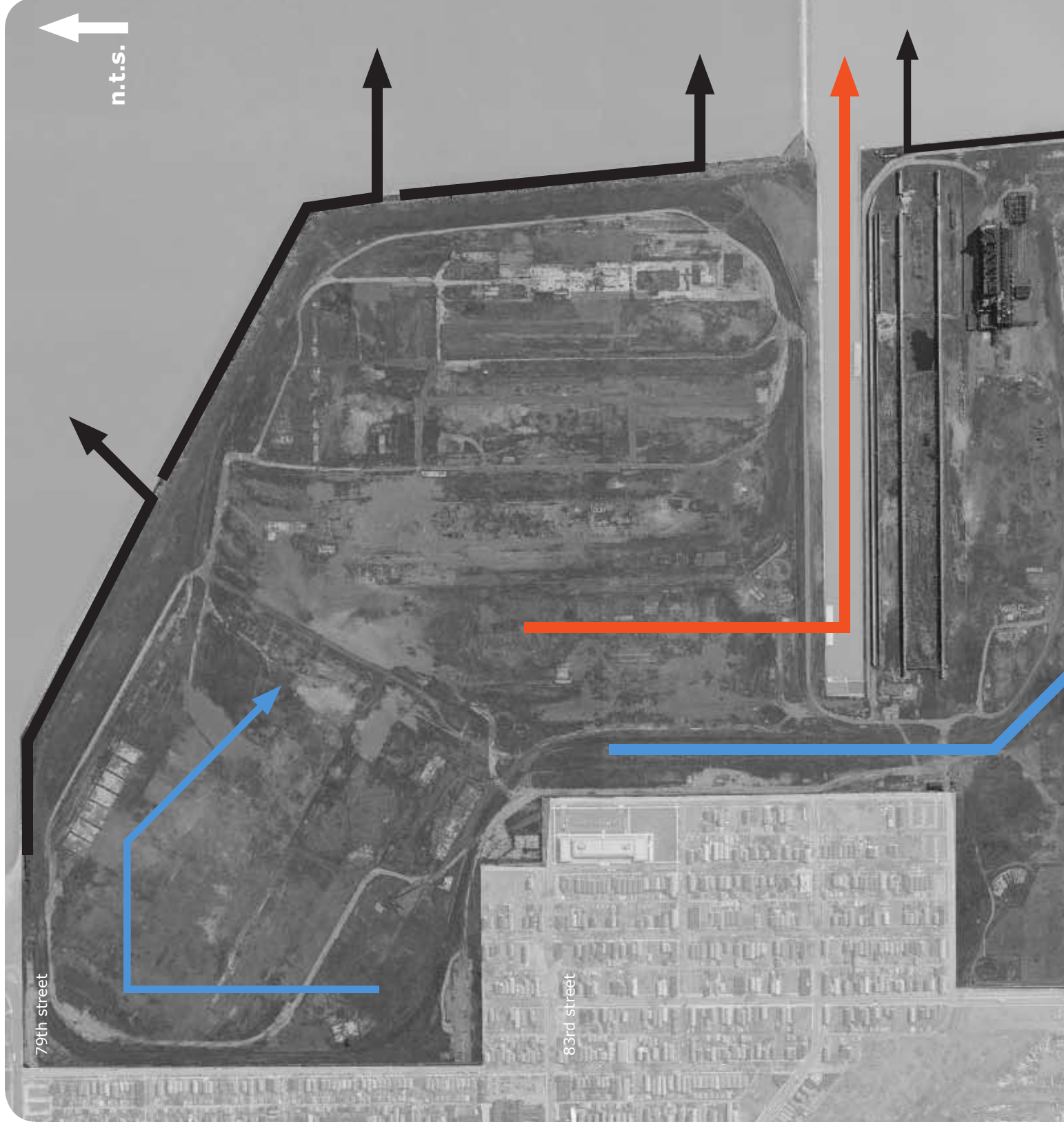
This option suggests creatively reusing the fill on-site without expanding the total site area. This allows less time and effort in moving the fill yet will be challenging in order to create slopes that will not effect surface flow and function.

Reuse

This option suggests separating the fill materials that will allow their reuse by industry and in the formation of building materials for the new development. This option is perhaps the most cost-effective solution that will also contribute to the sit's sustainable model.

Exportation

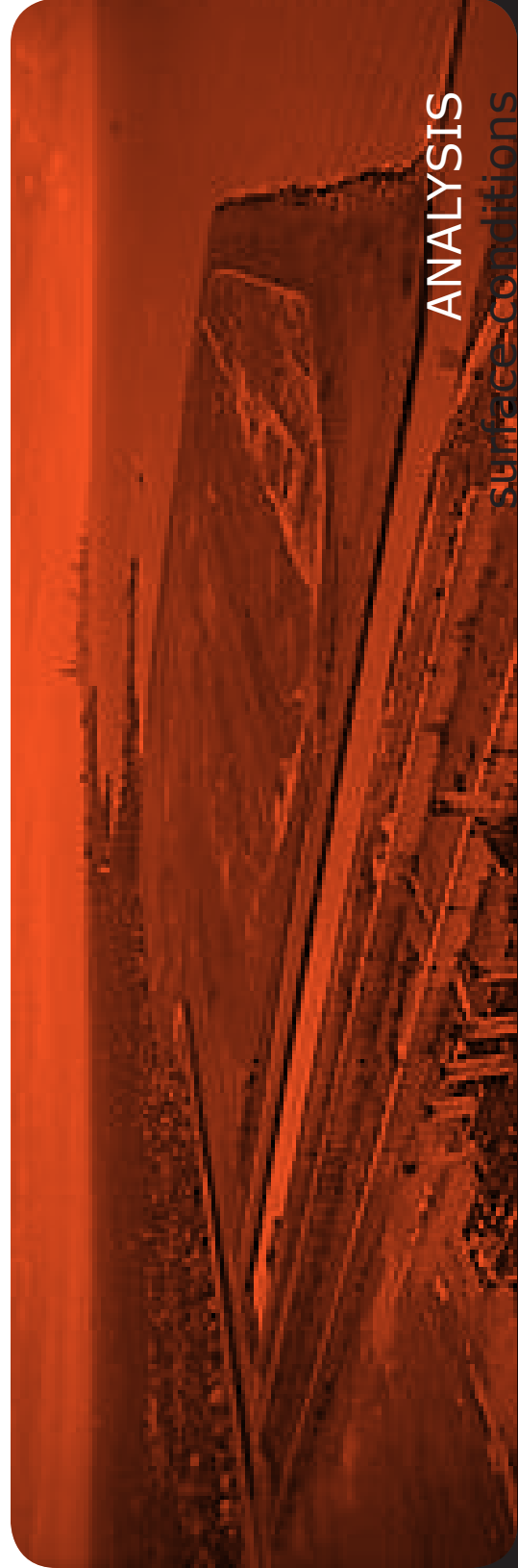
This final option suggests the exportation of excess fill from the site. This option is perhaps the most expensive of those above since it requires all the work required in the Site Expansion option plus all the transport fees from the transportation of the materials. This option is financially unavailable.



79th street

83rd street

n.t.s.



ANALYSIS
surface-conditions

key

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1.

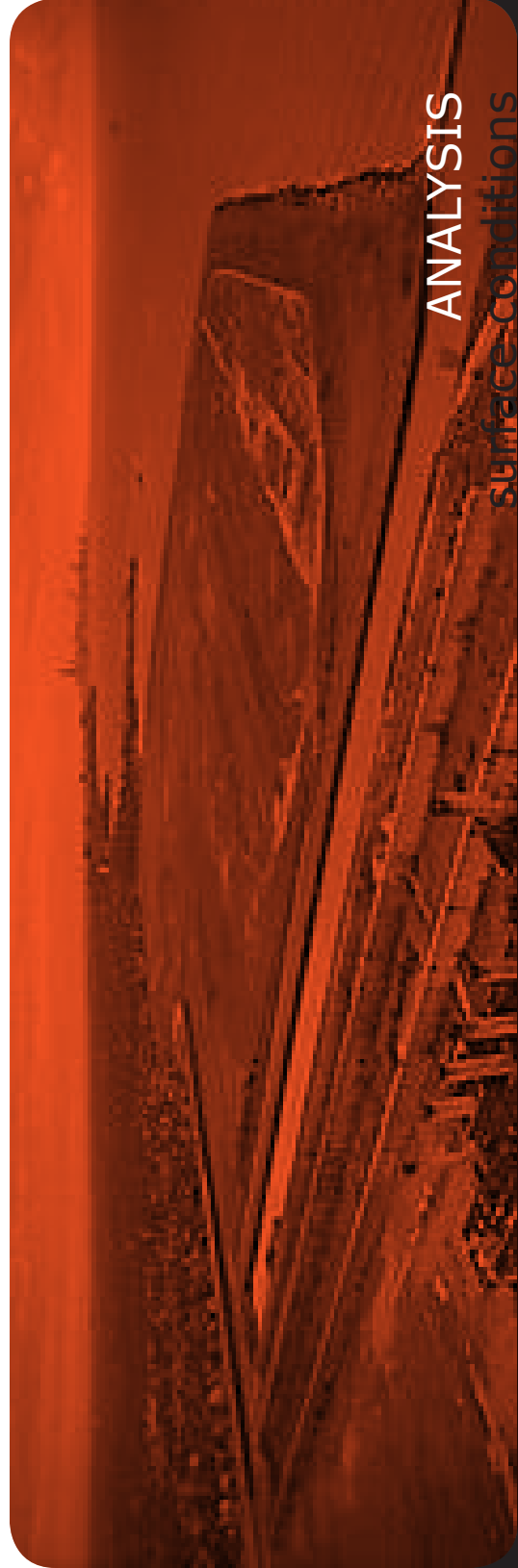




2.



3.



ANALYSIS
surface-conditions



key
Railroad Service and Marshaling Yard
As a measure to draw in new industrial development, the existing rail service, bridge and marshaling yard has been kept intact. Expansion of the rails is expected in the lower half of the property to be determined by the final development plan.

Sea Wall

The sea wall has been deemed stable and only suffers from an occasional stone being broken or brought back into the lake by strong wave action. This wall would need to be removed or rebuilt for any other function proposed by the development plan such as direct access to the water level.

Boundary Walls

Large concrete retaining walls hold back as much as 8' of fill above the surrounding neighborhood in this area. On top of this wall sits a 10' fence which makes this area an eye sore to those that live in this area. The fill that these walls retain is composed mostly of slag from the old steel facility along with construction debris such as bricks and other materials. This material can be regraded to suit the final redevelopment plan, yet large pieces of hot poured slag, some the size of a car, would need to be removed or reused on-site.

1. Existing Foundations

Although the buildings of the old facility have been removed, their foundations remain.

2. Ore Walls

These structures are massive and visually dominate the site. Almost 2000' long, 8' wide and 20' tall, it would take a great effort to remove these structures. Originally an important aspect of the former steel facility, these structures housed the ore needed to keep the facility running during the winter. They could be incorporated into the

final design to represent the history of the site.

3. North Slip

Both the north and south slips were important pieces of the South Works facility while it operated and they provide a wealth of options for the redevelopment of the site. The north slip has been envisioned by the community as a future location for a grand public space.

4. South Slip

The south slip will most likely remain for industrial use as the site is redeveloped. The southern half of the site remains the best location for industry due to river and rail access.

5. Power Plant (removed)

Operating until 2003, this power plant was the heart of the steel production process on the site. Coal burned here allowed the production of tons of steel that was distributed all over the country and made up the structure of many of the buildings composing Chicago's magnificent skyline. The plant was destroyed in 2004.

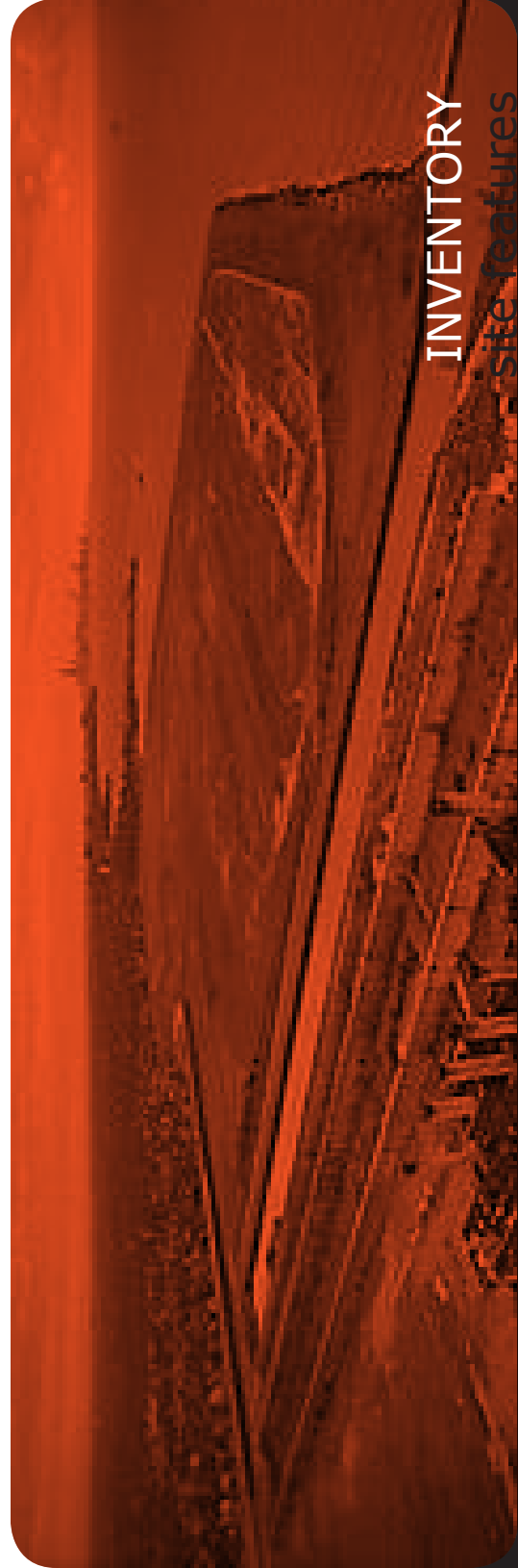
6. Soil/Biosolid Testing Area

From 200 through 2003, the water resource management division of the city of Chicago performed tests on various types of soil and amendments in order to attain a legitimate option for covering future park lands on the property.

7. surface cover

Except where buildings or rails were, volunteer weeds sprung up across the site that could find any reasonable soil to grow in. These weeds spread after the buildings and rails were removed and have no impact on the redevelopment of the site. Some weed species of trees remain on site and would need to be removed.

Process 59





Potential Gateways
The city of Chicago in conjunction with community members has published a comprehensive plan for the South Works site which includes the rerouting of state road 41 through the site as a major part of the redevelopment. The current and proposed routes are shown in this illustration along with the hypothetical gateways this change would make with the site.



Like previous analysis in this study, this illustration shows the influential east-west traffic corridors that will effect the development scheme for the South Works site. 79th, 83rd and 87th street will have the biggest influence, but 89th has potential as well in that it connects many major area parks.

Open Space Linkages

The views of downtown, the Indiana shoreline and along the Calumet River are the most important external views. Views along the north and south slips, views of the site after the reroute of 41 and views back toward the community are the major internal views of the site.

